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Vol. I December, 1930 No. 10

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Vol. I DECEMBER, 1930 No. 10

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TABLE OF CONTENTS

GROWING NEED OF PHYSICAL RECREATION AMONG EMPLOYED WOMEN 3
Bernice Amanda Miller.

ADMINISTRATION OF PHYSICAL EDUCATION AND HEALTH IN THE LIGHT OF GENERAL EDUCATION NEEDS. *Jay B. Nash* 9

REPORT ON FELLOWSHIP AWARDS. 13
A National Committee Report.

THE MODERN DELPHIC GAMES. 14
Lewis W. Riess.

TEST SCORING IN PHYSICAL EDUCATION ... 16
Frederick W. Cozens.

EDITORIALS 18

PHYSIOLOGY AT THE SERVICE OF PHYSICAL EDUCATION. Two Unusual Experiments which Throw Light on the Nature of Fatigue 20
Arthur H. Steinhaus.

AROUND THE COUNTRY WITH J. E. ROGERS 21

INTERPRETIVE RHYTHMS IN THE GRADES.... 22
Florence Owens.

WESTERN CONFERENCE FOOTBALL STRATEGY FOR 1930. *G. S. Lowman* 23

AUTHENTIC COSTUMES FOR FOLK DANCES . 27
Laura May Hill.

NEWS FROM THE EASTERN DISTRICT SOCIETY 32

ORGANIZATION CHART OF LONG BEACH, CAL. 34
Charles H. Hunt.

MASS TEACHING IN BASKET BALL SKILLS... 35
Ralph J. Schnitman.

INTRODUCTORY EXERCISES TO TUMBLING.... 40
J. H. McCulloch.

BOOK REVIEWS 58

INDEX FOR VOLUME I (1930) 59

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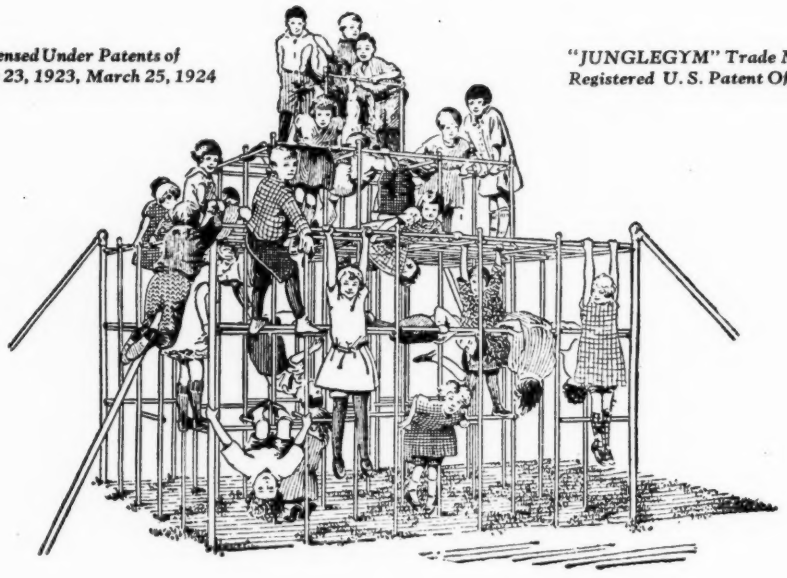

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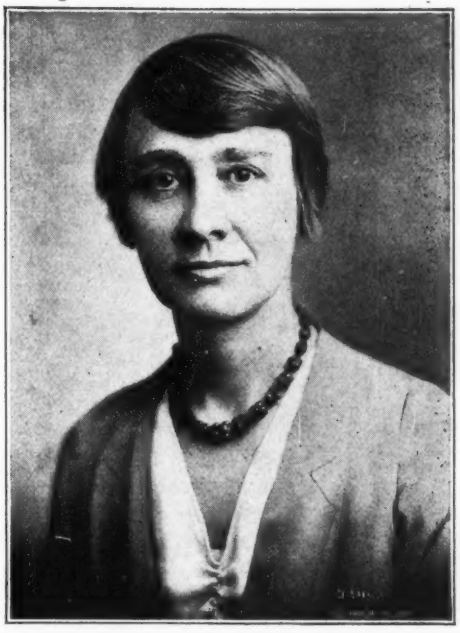
CHICOPEE **MASSACHUSETTS**

Growing Need of Physical Recreation Among Employed Women

One Woman in Every Five Is "Working"



Can Employed Women Be Attracted to Active Play?

By

BERNICE AMANDA MILLER

Metropolitan Director of Health Education
Chicago Y.W.C.A.

THE following is the situation I wish you to consider with me today. .

1. The employed woman. 2. The growing number of employed women. 3. The effect of employment upon her. 4. The increase in leisure time. 5. The employed woman's disposal of her leisure time.

The census of 1920 gave one woman in every five in the United States as gainfully employed.

An advertisement of a women's magazine showing a picture of a woman in her late thirties dressed in sober black and bearing the date "Anno Domini 1900" was commented upon as follows: "What has become of the useful maiden aunt? She isn't darning anybody's stockings—perhaps not even her own. She is a draftsman or an author, a photographer or a real estate agent... She is the new phenomenon in every day life."

If one woman in every five is employed, so also is one in every employed five, married. This fact has direct significance in the consideration of use of leisure.

Compulsory education laws make it impossible for children to work until they are fourteen or sixteen years old. The number taking advantage of high school education has increased faster than the increase in our population. However seventy per cent of all women employed are under twenty-five years of age.

As already indicated women are performing all kinds of work, from acting as judges and governors of states to driving railway locomotives—or feeding buttons to a button sewing machine.

Important in the consideration of what effect employment is having on women is the increased mechanization of work.

To quote Stuart Chase from his book entitled *Men and Machines*—"It has been determined that sixty per cent of a cigar store salesman's motions and speech are purely automatic, calling for no human initiative at all. Bright young men become shortly dull-eyed and bored. Why not give the work to a machine?"

Here is an electric carpet sweeper doing housework in a tenth of the time previously spent on it; an electric washing machine cleaning clothes without any muscular effort; a power chisel which does the work of ten men.

Two men now charge a steel furnace which once required fourteen men; in the liner "California," three white garbed firemen presiding over gauges replace one hundred and twenty stokers. There will not be a switchboard girl for local calls in Washington by 1930; the dial system will have superseded every one. Girls are listening and typing to a dictaphone. Comptometers and bookkeeping machines are replacing bookkeeping ability.

All of us are affected by the onslaught of machinery—most of those outside of factories and some within

profit by it. For instance, "The fact of operating a powerful machine with full responsibility for its control, far from being a monotonous, depressing, soul destroying job, is as a rule, precisely the opposite. It tends to expand the ego, establish self-confidence, break down inhibitions, keep one out of a rut. One needs no further proof than the health records, both mental and physical, of locomotive engineers as a group. A finer, more courageous, better balanced body of men is not to be found in this or any other civilization." Indeed, no more proof is needed than one's reaction to driving a motor car, if the runs are not interminably long or over complicated. "An automobile is an extension of one's personality." to quote Mrs. Lillian Gilbreth.

When we descend to plain machine-tending, however, the story changes—particularly when the machine sets a remorseless rhythm to which the worker must adapt himself.

Stuart Chase gives us the following graphic picture. In one of the great establishments manufacturing automobiles, there is a room filled with punching machines. In front of each machine stands a worker, feeding it pieces of steel by hand. A lever is geared to the mechanism, and to this lever the man is chained by a handcuff locked to his wrist. As the punch comes down, the lever moves back, taking the hand with it. If for any reason a man wishes to leave the room, all the machinery must be stopped and his handcuffs unlocked by the foreman. To look down the long room is to see machines, levers and men in unison—feed, punch, jerk back; feed, punch, jerk back....I have heard of no other single task today which so closely approximates the gloomy prophet's picture of the robot—that mechanism of flesh and blood first heard of in a Czech-

CORNELL SQUARE "A" TEAM

Champions, 1928, Chicago's South Park System.

oslovak play, towards which, it is alleged, all men are moving. Yet these workers were handcuffed partly out of pity for their flesh and blood. Before the articulated levers were installed, they were, despite the guards, continually losing their fingers and their hands under the down thrust of the punch.

These illustrations are typical of what is happening to women as well as men in the factory of today.

Out of 41,615,000 gainfully employed in the United States, there are estimated by Mr. Chase to be 10,165,000 at factory jobs, and 5,594,000 of these are subject to the deadening effects of being slaves to machines.

Although factory conditions have generally improved since the initial stages of the industrial revolution, this group still suffers from injuries to the body, injuries to the mind — industrial diseases and accidents; the robot is subject to a growing burden of mental maladjustment resulting in nervous breakdowns, neurosis and psychosis; he is becoming a sub-man, says Mr. Chase, incapable of taking an intelligent interest in public affairs, and so a liability on the whole body politic.

The traditional occupations of woman in the home — although these did not give her the satisfaction of a pay check — did give her opportunity for big muscle activity for variety and use of her creative ability. We find today large groups of women employed at jobs which are for the most part deadening to the spirit and in very great part sedentary.

Courtesy Industrial Mutual Association, Flint, Mich.

BASKET BALL

Chevrolet and Buick Main Office teams.

What effect has this had on the health of employed women?

The famous old Massachusetts mortality table covering 250,000 persons in all walks of life shows highest death rates for "females in trades," trainmen and teamsters, and indoor sedentary workers; with lowest rates for professional men and farmers. While the health of factory workers has been improving with that of the general population, as a class they still undoubtedly die earlier than farmers and professional men. The machine is not alone responsible for this—long hours indoors with the worker sitting or standing in a fixed position is another concomitant of the machine age.

Courtesy, I. M. A., Flint, Mich.

A REPRESENTATIVE TEAM

The Tuberculosis death rate among women from fifteen to twenty-nine years of age is 50% greater than for men of the same ages.

Employers state that absenteeism is far greater for women than for men.

Insurance companies seldom give disability insurance to women.

The restriction and mechanized character of work has made great inroads on the health of women who have poured into the industrial field in the last twenty years.

The amount of time spent at the job is progressively diminishing. What use is the employed woman making of her increased leisure? Few glimpses of life in the United States today give us any impression of leisure and yet using that term to denote time free from the job—leisure is increasing.

A recent publication by the National Industrial Conference Board on the Five Day Week in manufacturing industries furnishes one evidence of this.

Two hundred and seventy industries, largely clothing industries and preeminently the Ford Motor Company have reduced the working week from six or five and one-half days to five days. This has not all come in the immediate past. The earliest instance occurred in 1908 and has been maintained for twenty years; other plants began the five day schedule prior to 1914; the greatest progress in the movement for shorter working week has come since 1923.

Some 400,000 workers are affected in the 270 industries studied. This is 2.6% of the industrial wage earners in this country.

The report states—"like most departures from prevailing practice, the five day week, at least at first has certain drawbacks; however, the disadvantages appear by the study made to be outweighed by the advantages. The preponderance of opinion in favor of the five day week schedule indicates that in most plants reporting, it has commended itself to both management and working force."

The five day week is the latest point reached in reduction of hours of employment, and is by no means universal. However, the eight hour day is now generally accepted as standard. Gradually within the past fifteen years this has come about.

Courtesy, I. M. A., Flint, Mich.

BOWLING HAS ITS WOMEN FANS

If her work must of necessity be of the deadening kind—after all she now spends but one-third of perhaps six days each week at her work. What about the conditions and habits that govern the rest of her life? In contrast to the routinization of work the remaining hours of the day are called leisure hours—and as Mr. Lind, author of "Middletown," remarks—"Quite characteristically in a pecuniary society these precious hours are 'spent'." Middletown describes this spending as divided between: Talking or listening to talk; Reading, especially newspapers and such weeklies as the Saturday Evening Post, Collier's, Liberty; Music in a non-participating form after childhood music lesson days are over. As to art, there is "little of creating and much of listening to papers on art." These uses of leisure would hardly imply that our worker is being recreated during her free time. Here again we have non-participating, mechanized, sedentary forms of activity.

THE POSTURE OF MILLINERS

In this photograph are pictured the bodily attitudes of milliners at work in Chicago factories

Stuart Chase gives interesting statistics on the amount of sedentary, non-participating amusements now indulged in:

Newspapers and tabloids 35,000,000 circulations a day.

Radio, 30,000,000 listeners a night.

Phonographs, player pianos, 15,000,000 a night.

Moving pictures, 50,000,000 admissions a week.

Theatres, concerts, shows, etc., 5,000,000 a week.

Pleasure motoring, 40,000,000 every Sunday.

Courtesy, I. M. A., Flint, Mich.

AWAY FROM CITY NOISES

A group enjoying a vacation period at the I. M. A. Camp.

These figures serve to drive home one cardinal point, says Mr. Chase. "As a people we tend to take our diversions second-hand." In Middletown "The leisure of most men and virtually all women is mainly spent sitting down" in a motor car, at the movies, reading or listening to the radio.

This was not the old New England town's idea of play. Today it is the larger part of our play and "I suspect," says Mr. Chase, "the ratio is increasing. Among mature peoples—and happily among our own children still—play is active participation in the dance or game, in which muscles, voice, senses, rhythm, are all involved." Mr. Chase would not have us return to the days of our ancestors but he urges for "the spirit of the dance, the letting go with mind and muscle in play activities which give release to timeless biological patterns, and so bring rest and peace. Such play is primarily active—participating"..."There is just a chance," he says, "that these true recreations may win out in the teeth of the commercial drive in the opposite direction."

LAMP SHADE WORKERS

These girls, who have worked in Chicago shops, know how to demonstrate the postures assumed by employees.

In contrast to these facts, what active recreation would be available to the employed woman in a city, did she choose to elect such? To take one city as an example: the Chicago Association of Commerce tells us there are 370,000 women at the present time gainfully employed in Chicago. These women have left school anywhere from the age of fourteen on up. Since leaving school, they have been almost entirely without trained leadership for their recreation needs except insofar as the park systems provide this; and the reports

Courtesy, I. M. A., Flint, Mich.

THE SOCIAL DANCING LESSON

of the parks indicate that there are comparatively few girls over sixteen years of age using their facilities.

For the 475,000 boys and girls in the Chicago Public Schools there are now employed 459 physical education instructors, men and women. The Board of Education does not have separate figures on numbers of girls or of directors working only with girls, since some of the women directors instruct boys. However, if we should divide each of these figures in half, there is, approximately, one leader for each 1,000 girls in school. This is few enough but for the 370,000 employed women it would be a liberal estimate to say that there are now 35 trained physical education people working with them, one for each 10,000 young employed women. This includes parks, settlements and social centers and Y. W. C. A. leadership. There is in addition some part time work being done with commercial, industrial and church groups by people who carry full time jobs elsewhere.

Resources in Chicago

1. *Business Houses* — The most important factors in the securing of adequate, wholesome recreation are equipment and leadership.

Instances where some equipment and leadership exist in Chicago Business Houses are as follows:

The Western Electric Company in Cicero maintains excellent equipment, but does not employ as such a trained physical education person knowing standards for exercise and sport of women and girls. Two hundred out of their 10,000 women employees take part in their program for sports.

The Illinois Bell Telephone Company promotes recreation by giving information to its employees on what is available in the community. They arrange for groups in parks, they have been urging some of their girls to come to Y. W. C. A.'s for swimming and for roller-skating. They do no actual organized gymnastics or play within their own plants.

The banks in Chicago have been in the lead as far as providing some athletics for their employees in an organized way. Three years ago, a small group of women physical directors, members of Women's Division of N. A. A. F., organized sufficiently to assist the banks in forming an Athletic League and to furnish the league coaches and officials. Of the banks, the *Federal Reserve* and *Continental Commercial* have gymnasiums. Each of these banks has for some years employed a man physical director who has intermittently organized classes for girls as well as men. These have been very irregularly attended. Some of the other banks have small rooms with some gymnastic equipment. *The First National Bank of Chicago* is now employing a trained physical education director who has enrolled some 250 to 300 of that bank's 350 women employees in sports of various kinds, such as swimming, riding, bowling, and basket ball. The majority of the twelve banks in the Chicago Bank Women's Athletic League have played only basket ball.

Courtesy, I. M. A., Flint, Mich.

LESS ACTIVE FORMS OF RECREATION

Courtesy, I. M. A., Flint, Mich.

OUTDOOR VACATIONING

Many industries maintain summer camps for their employees.

The Chicago Surface Lines (Street Car Company) has a swimming pool for its employees which the women use one evening a week.

This is a rough but quite complete survey of active recreation promoted by business and industrial houses of a great city. Some half dozen concerns have Summer Camps for employees. Many who are interested in the field of industrial recreation feel it much wiser that this should be planned for away from the place of work. It would, therefore, fall into the hands of public or semi-private organizations.

2. *Public or Semi-private Organizations*

Let us turn to them and see what is done for employed women.

The social settlements provide recreational facilities. Most of them have gymnasiums, which are used almost exclusively by men and boys, though in some settlements the girls use the gymnasium one night a week. Physical education students do volunteer work with classes to meet their practice teaching requirements. The program in the settlements is planned from the group interest standpoint and comparatively little of a continuous physical recreation program is developed.

The Jewish People's Institute, Sinai Social Center, Butler House and the Eleanore Social Center each acts as a community center offering a program of athletics and swimming to girls and women.

Last year some 7,000 women and girls took part in the activities of the Y. W. C. A.'s three gymnasiums and three pools. The number served by the above listed agencies is a pitiful percentage of the 370,000 employed women in this city.

MARRIED WOMEN'S TEAM
Russell Square, South Park system, Chicago—Champions, 1928

Some churches have gymnasiums and have promoted athletics for girls as well as men. Very few have employed trained women coaches and the program is apt to be sporadic, depending on whether or not any volunteer leadership appears. A so-called "Church" Athletic Association has come into existence to stimulate highly competitive games between girls' teams as well as boys. It is only very recently that the Chicago Church Federation has taken cognizance of the fact that this organization is running girls' tournaments of basket ball games and track meets with standards far below the acknowledged standards for athletics. This has been possible for some years because there exists in Chicago no central standardizing body with knowledge of the best practice in the field, which could serve as a resource to help provide athletic competition under wise conditions. The "craze" for girls' basket ball competition stirred up by commercial interests for the most part, has therefore made groups of girls easy prey to other mercenary interests who gain neat "entry" fees from teams who enter the "Church" Athletic Association.

"Play is the flywheel of life and America,...does not know how to play. It can only step on foot throttles, insert coins in metal slots, scan headlines, crowd the clicking turnstiles, rush headlong down roller coasters—seeking a balance which these things can seldom give."

Unless the worker can recapture the lost art of play, the greater leisure which shorter working hours give will never do him any good—may even do him ill. We must break through the commercialized amusements

(Continued on page 43)

Courtesy, I. M. A., Flint, Mich.

A LOUNGE ROOM FOR WOMEN EMPLOYEES
Part of the splendid facilities of the I. M. A. Building, Flint, Michigan.

Administration of Physical Education *and* Health in the Light of *General Education Needs*

By

JAY B. NASH, Ph.D.

Professor of Education, School of Education, New York University; Chairman, Department of Physical Education, National Education Association

THE terms Health and Physical Education are by no means synonymous. More and more, however, the two functions of the school are being tied together merely for the purpose of administration.

Definitions

Health Defined. Health is a condition of the human organism. It symbolizes a state of being fit; in other words it symbolizes the possession of vitality and power to perform the tasks at hand. Hence, health is an outcome, an objective to be striven for; an objective which should be constantly in the mind of the teacher, but seldom, if ever, conscious in the mind of the child.

To a large extent Health Education is an administrative task. Health must therefore be contracted to Physical Education, which constitutes one of the *activity* arms out of the public school. Other activity arms, such as music, manual training, social sciences, exact science and the tool subjects, also have their contributions.

Physical Education Defined. Briefly, physical education is the administrative or teaching division of education that is concerned with the vigorous total body activities as distinct from the manual, musical or scientific activities and from the tool subjects. The phrase "total body" is used because in the activities of physical education, more than in any other activities, the total body is functioning; that is, the muscular mechanisms are functioning as well as the neuro-affective mechanisms.

Physical Education Illustrated. A conception of present day physical education may be gained by visualizing the activities on the playground together with the aims of a trained leader directing these activities. The word playground must not be used in a narrow sense but in a very broad way. It must be used to symbolize all of the places where total body activities may be organized. It must symbolize the school yard, the gymnasium, the swimming pool, the vacant lot, the camp, the play room, the back yard, the roof garden, the garden court or any space indoors or out-of-doors in which activities such as dancing, swimming, self testing activities, athletics or plays and games may be carried on. The gymnasium and the indoor play rooms should never be considered anything more than bad weather institutions. It is of primary importance that in connection with the gymnasium we realize the importance of adequate showers, dressing rooms, administrative offices, examination rooms, conference and class room units. It is highly important also that the conception of the physical education plant be enlarged to include not only these facilities of the gymnasium but all of the outdoor space which is available for physical activity.

Total Body Activity. In order to visualize physical education activities and in order to gain a conception of the possible values in them, it is necessary that we have a clear conception of what is meant by the term "total body activity." "Total body" carries with it all the implications which have formerly been listed under "physical" activities and "mental" activities. The term "total body activity" is used in an effort to sound the death knell to the distinction which is so often made between these activities.

It must be apparent, immediately, that the term "total body activity" cannot be defined definitely. Even "big muscle activity" or "vigorous activity" cannot be defined definitely because they would differ in accordance with the age and capacity of the individual. What would be total body activity to one might not, necessarily, be total body activity to another. Also, an activity that is vigorous to a child would by no means be vigorous to a well trained adult. An activity which might be vigorous to an untrained adult might not be vigorous to a trained adult.

Hence, activities must be considered from the standpoint of a distribution scale. Some activities are high on the scale, the so-called "physical" or big muscle activities. These might be illustrated by football, basketball, hockey, lacrosse, etc. Other activities might be high on the scale of interpretive thinking, formerly called "mental" activity. These might be illustrated by the decision of the batter in baseball, and again, by that of the mile runner as he varies his pace to meet that of his opponent. Some activities are high on both the physical and mental scales. A quarterback in the game of football indulges in both big muscle and in interpretive activities. The naturalist who gathers and classifies specimens on a long field trip that involves mountain climbing is also active on both scales. A switchboard operator is performing an activity low on the big muscle scale whereas many workers in this machine age have jobs very low on the interpretive scale.

Limits of Administration. In the broadest sense, administration refers to a total outcome and all of the constituent parts that combine to produce that outcome. A city superintendent of schools, acting as the administrator, by and with the advice of a governing board and the people, becomes responsible for the entire educative process of the city school system. He is as much responsible for the total outcome as the teacher is responsible for the educative process in a one-room school. In this large city situation there is, however, organization, routine administration, business management, supervision and teaching.

We may say that administration as such puts in its appearance when the overhead or organizing tasks become so complicated that the individual teachers cannot carry these together with their teaching functions. The administrator, while responsible for the entire process, must recognize the needs of experts and must delegate responsibility to them. While final judgments are his, it would be foolish to proceed without the advice and help of these experts. Hence, we have in administration, executives, general supervisors, supervisors of special subjects, principals, business managers, teachers, etc. Administration might be likened to a great tree where each of the limbs represent special departments and the roots sources of incomes. Routine administration represents the roots and trunk of the tree which make possible the "growing edge" which is teaching. Administration ties the whole together in a functioning unit.

Principles in Administration

Can administration be divided up into component parts? Possibly it can, but these must never be considered without always keeping in mind their relationship. The total result is one picture regardless of how many units make up the picture. It might, however, clarify the situation to think of administration in three parts, *setting objectives, clearing the path,* and *checking results.*

Setting Objectives: One of the principal tasks of administration is the "setting of objectives." It must be determined what ultimate outcomes are expected, otherwise not a dollar could be spent for a school plant, not a teacher could be hired, not an administrative policy could be set up.

What then are the particular objectives which Physical Education sets up for itself as a contribution to General Education? In a direct or indirect way a contribution is made to all educational objectives whether they are listed as the Seven Cardinal Principles or as "seventy-seven principles." Two of the major objectives will be treated here specifically, namely, *Health* and *Character.*

Health is an objective of Physical Education, and as such can be analyzed into its component parts, namely: (1) building of organic capacity through exercise; (2) freeing the body of handicapping drains; (3) freeing the body of handicapping strains; and (4) the establishment of health habits.

(1) Building of Organic Capacity through Exercise. It is only in the light of physiological researches during the past decade that we have come to realize the value of exercise or what we have called "play activities." This organic development we use synonymously with vital reserve, endurance resistant to fatigue.

We now realize that physical power can be built. We have seen it developed in athletes, mountain climbers, and other individuals who have trained. We are particularly indebted to the work of Edward C. Schneider[1] for analyzing much of the research in this field, also for conducting elaborate researches himself.

The capacity of a man is measured by the extent to which he can call upon his body for increased effort. It has been shown that training increases the capacity of the body to utilize oxygen, partly by increasing the number of red blood corpuscles, partly by the more efficient workings of the body mechanism.

It has been shown that the crest-load of work can be increased through training. This crest-load has actually been shown to increase from 200 foot-pounds to 700 foot-pounds at the end of six weeks of training.

Dr. Schneider furthermore summarizes a number of other advantages which accrue from training:

"Another factor of minor importance may be an increase in muscle hemoglobin. Thus in a caged adult dog the heart muscle contained 400 milligrams of hemoglobin per 100 grams of tissue, while there were 700 milligrams in an exercised dog.

"Still another factor that operates within the muscle is this, that by training, new capillary paths are opened for the blood. These greatly increase the area of diffusion and favor the exchange of materials between the blood and muscle fibers.

"Since the bicarbonate of the blood constitutes its alkaline reserve and, therefore, determines its capacity to buffer the lactic acid formed during exercise, it follows that the less there is of this reserve the sooner will fatigue result with a given exercise. It is of interest, therefore, to find that physical training actually increases the alkaline reserve. Full and Herxheimer showed that in 13 highly trained athletes the alkaline reserve averaged 72.12 volumes per cent; while in 18 normal, but untrained, people the average was only 65.15 volumes. Apparently training increased the alkaline reserve of the blood as much as 10.7 per cent. An increase in the buffering of the muscles has also been reported. These changes undoubtedly give greater endurance to the trained men."

Thus is it becoming apparent that the long years of activity during childhood have had some relationship to adult power. This activity went on naturally through the play drive of the child, when conditions were opportune.

With growth and the advent of modern machinery opportunities for this activity have been lessened. We now begin to realize that in order to lay the basis of health, physical training activities which will motivate four to six hours of the child's day, must be made a school procedure.

(2) Freeing the Body of Handicapping Drains. The second primary element in connection with health is the removal of the handicapping drains. They may be in the form of bad teeth, tonsils, adenoids, etc. Much has been said upon this subject and its importance is well known.

[1] Symposium on Physical Education and Health. E. C. Schneider, New York University Press, N. Y. 1930. p. 67.

It is interesting to note that the President's Conference on Child Health and Protection points out that the rural child suffers more from these defects than the city child.

This phase of health becomes the task of the medical profession. The point to note is that the removal of the defects does not build power nor guarantee positive health, it merely removes handicaps. Health must be built through activity.

(3) Freeing the Body of Handicapping Strains. It is only recently that we have come to realize that strains such as worry, fear and pain, are definite handicaps to the child in connection with body growth and health.

Strains of all kinds tend to slow up all body functions in the whole nutritive chain. This is well set forth in connection with the modern researches of Cannon and Jennings. Removing strains from the child becomes a definite health objective.

These handicaps are more elusive than adenoids and tonsils and cannot be removed directly. One condition of the human organism indicates the absence of all strains. That condition is represented by the three lettered word "Joy."

Thus Jennings sums up the situation in the following:[2]

"One of the most striking things in the development of modern physiology is its gradual recognition of the great value of those pleasurable emotional states which may be classified together under the abused word 'joy,' and of the harmfulness of the opposite emotional states—anxiety, sorrow, worry, fear, pain, and the like. The condition of happiness, of 'joy,' is that in which development is unhindered, and flourishing; in which the functions are proceeding harmoniously; while worry, fear, unhappiness, are the marks of the reverse condition of affairs; something is blocked and is going wrong."

Inasmuch as the Physical Education activities represented by the games of childhood constitute one of the chief sources of "joy," these activities become a definite objective in education.

(4) Establishment of Health Habits. How are children, or adults for that matter, going to be induced to follow the simple health rules which are recognized by every one as important? Most of our health rules are like our traffic rules—they are made for the other person to observe. The person who makes them has often little thought of observing them himself. The teachers who give health rules to children, in many cases, do not follow them.

From the standpoint of the child the following of health rules means sacrifices. Abstaining from a piece of candy between meals is a sacrifice; likewise, going to bed early is a sacrifice. Even though every act of the child is supervised by parents and teacher, the time will come when this supervision will end and the child will be on his own.

The simple conclusion is that the child will follow health rules if he wants to, and he will want to only if he realizes that they have something to give him, namely, that they will be an asset in doing the thing he wants to do. This for years has been the principle of the training table in colleges. Imagine a college man presenting himself to the training squad and saying "I want to play football." The coach looks him over and says, "All right, bring your suitcase down. From now on until the end of the season I am going to tell you how many hours you sleep, when to go to bed, when to get up, what to eat for breakfast, lunch, and dinner, how many rides to take in automobiles, how many dances to attend, and if you violate one of these rules, out you go," and this young man with the exalted ego, salutes and says, "Yes, sir." Why does he do it? Why does he not talk back to him as he does to the traffic officer? Because the coach has control of something that young man wants to do. He submerges his personality and the things that he generally wants to do and that the other boys are doing, because he wants more intensely to do something else.

Hence, the building of health habits should be attained from the positive angle, namely, of helping children do the things they want to do. It should not be made a conscious process, but it should become a by-product of the child's natural life.

In summary, health as a condition of the organism is closely related to physical education: first, because, through exercise, power is built; second, because, through the joy of games, we can conscientiously divert the stress of worry and fear; and finally, because it is through many of the physical education activities that the child will pursue health habits in order to achieve. As such, health becomes an educational objective in the minds of leadership; it becomes a natural product of wholesome living upon the part of the child.

In spite of the fact that health is such an important objective in education, it still cannot be considered the aim of education. Our penitentiaries may be filled with healthy people, our racketeers must of necessity be healthy, yet we cannot point to them as a finished educational product.

CHARACTER, again, must be a subconscious by-product. It cannot be aimed at directly. It cannot be consciously in the mind of the child and yet must be consciously in the mind of the leader.

In the early stages the attractive element of crime is the thrill. All the playground games, especially athletics, are built up upon the same element—thrill. It is a playing with the fear mechanisms. The original "it" in the "tag and it" games during childhood was actually dangerous. There was exaltation in the escape from the "it," and there was, of course, tremendous depression in being caught. Society of today represented by the police, has, in many instances, taken the place of "it." Judge Lindsay, many years ago, stated that "The thrill which the boy gets from stealing fruit at the corner grocery store is exactly the same thrill which he gets in trying to steal second base." In such case it is the thrill of being chased and the thrill is heightened by the possibilities of being caught.

The race has been built upon this thrill and childhood must have an opportunity to experience it in socially approved ways. In large cities today these thrills are

[2] "Suggestions of Modern Science Concerning Education." H. S. Jennings, Macmillan Co., New York, 1925. p. 42-43.

gotten from the roofs of our buildings where there are clubs for meetings and where regular paths are laid out for groups to go from one building to another and up and down fire-escapes. In our cities, these thrills are gotten in the railroad districts, along the wharves, stealing brass and lead from contracting jobs, rubbing chalk marks off all automobiles which exceeded the parking limits and collecting from the owners before the police arrive, gambling on which way the money comes up from the turnstiles of our elevated and subways. There is even a thrill from playing in the street, in taking chances with the fast moving traffic. These are real thrills. The gang sets up its loyalty, has its own code and sometimes sets itself against society.

These thrills cannot be combated by ping pong games, jungle-gyms or community singing. Many of our playgrounds are pale as compared to the thrills of the street. The live, red-blooded boy may make fun of them with reason.

Athletic games, however, do contain the thrill. They are sufficiently emotionalized to be a real competitive to crime. One group is set against another group under rules and the fear element may be dramatized to the point where it stirs emotions. Athletic games may become the *moral equivalent of crime* in the very sense which James indicated a few years ago and athletic games may become the *moral equivalent of war. Give children an opportunity for legitimate thrills and crime loses its hold.*

Clearing the Path: With the above objective in mind certain administrative procedures must be apparent. These administrative procedures center around the following elements:

TIME: To secure objectives it is necessary to have a great amount of time, more than can possibly be supplied in the school day. This means the school procedure must motivate the "out-of-school-time." For the elementary school child, the time needed for physical development is from four to six hours daily; the high school needs are less. This should point to the place where physical education should be stressed, namely, the elementary school. The place athletics in the high school should take in this should be apparent. Organic capacity is not built in the bleachers.

SPACE: To get objectives we must have space in which to conduct activities; large out-door areas and gymnasiums to act as rainy day substitutes. We must have lockers and showers if educational results are to be acquired.

CLASSIFICATION OF CHILDREN: Educational procedure will demand that children be classified. A medical examination must set aside all those whom vigorous activity will harm and limited exercise must be prescribed for them.

Accomplishment tests must classify the rest of the group in accordance to ability, in order to make the activities challenging.

CLASSIFICATION OF ACTIVITIES: The particular values in activities must be determined in order to make a wise program assignment to groups of children.

LEADERSHIP: This means that leaders must be chosen who are well trained, with a background of science, philosophy, sociology and psychology as well as skill in activities, in order that educational results may be guaranteed.

It must be apparent that, with this expensive school equipment and the fact that the public school has become practically universal, the school must take a *three hundred and sixty-five day responsibility for the play activity of the child.* The school is a direct arm of the State as is the City. Because of this relationship, a close tie-up between the school and municipal playground and municipal park seems impossible. Since the school has maintained its independence it must extend the use of its property under leadership to all the children. This extension of the school plan should come not only in connection with physical education activities but with music, drama, manual training, etc. There is every evidence that the trend of the school is in this direction and school superintendents are ready to shoulder the responsibility.

Checking Results: Administration must also check results. If responsibility is to be delegated, progress must be verified. Those who are in administrative positions must devise means of checking results in their own work as well as verifying those in the work of subordinates.

In checking results it is necessary to develop what might be called "dash-board indicators." These indicators are not significant in themselves but indicate what is going on in the strategic points of the car. In physical education, dash-board indicators, although insignificant in themselves, tell a story of relationship of pupil and teacher, of individual to individual. They point toward respect for property, toward willingness to cooperate and to sacrifice, and to standards of courtesy and happiness. A person can be judged and results measured by the dash-board indicators on his department or his policies.

Summary

Responsibility for all of the administrative problems which have here been outlined must eventually rest upon the problem of training of leaders. The child has a dynamic activity drive. Whether the results of this activity leave the individual high on the social scale or low on the social scale depends largely upon leadership. Standards are set by leaders and most standards are adult standards. These adult standards must eventually be expressed in group standards and hence the responsibility of leadership must be turned over to the group.

Leaders must be trained. The responsibility of guiding child development is second to no other profession. Its training must be second to no other profession. In this training the unity of body and mind must be kept constantly in mind. The organism must be studied in terms of a bio-physical mechanism. Physiology must be viewed as the meeting ground of all the sciences. This bio-physical mechanism is the unit upon which all health, personality and—if you please—spirit, itself, must be built.

This total physiological picture must be broken up into its many elements. Hence the body must be studied in terms of bio-chemistry. In this we must study the chemical changes that take place in respiration, digestion, circulation, etc. This thin knife edge upon which life exists in terms of temperature, metabolism, etc.,

(Concluded on page 56)

Report on Fellowship Awards

A National Committee Report

THE Committee on Fellowship Awards respectfully submits herein its report of considerations, conclusions, and recommendations.

THE COMMITTEE

A. G. Ireland, *Chairman*
John F. Bovard
A. D. Browne
E. W. Everts
Vera Gardiner
F J. Gray
Tucker Jones
W. R. LaPorte
Margaret McKee
J. Anna Norris
Emil Rath

The Problem

The committee was charged with the duty of studying and reporting on the feasibility and the merits of a proposal to honor individuals engaged in the profession of physical education or in allied fields of science and education by means of an award of recognition to be determined. Should the committee report favorably on the proposal, it was charged further to study and report on the ways and means of effecting said recognition and the form it should take.

Procedure

The appointment of a chairman was made by President Maroney in a letter dated February 11, 1929. The committee appointments were made shortly after.

The study proceeded by means of a series of intercommittee communications and a mail vote was taken on all important questions.

A preliminary report was submitted to the National Council at its meeting in New York City, December 30, 1929. At that time the committee was directed to continue with a view to clearing up several points in time for a final presentation at Boston in April, 1930.

Decision on Primary Question

It is the opinion of the committee that the American Physical Education Association is warranted in establishing an award of honor and it so recommends.

Nature of the Award

It is the recommendation of the committee that the award consist of the election of the recipient as "Fellow of the American Physical Education Association."

Material Evidence of the Award

The committee recommends that the election to "Fellowship" be designated in a material way by (1) a diploma, (2) an historical record of the recipient's professional life and contribution to physical education for the permanent files of the Association, and, (3) the publication of said historical account in brief in THE JOURNAL OF HEALTH AND PHYSICAL EDUCATION.

Material recognition in the manner described is regarded as desirable since it fulfills a principle of democracy, it proclaims meritorious service, and it inspires to like attainments those who follow.

The Diploma

For the diploma, the committee recommends white diploma paper of good quality, approximately 7¼" by 9½" in size, covered by glass and suitably framed.

At the bottom of this page will be found the committee's recommendation for the wording on the diploma.

Qualifications

The committee recommends that qualifications or standards by which nominees for the award are selected be left general in order that each candidate may be judged individually by his contribution and service. Thus, instead of establishing specific itemized attainments which each nominee must have reached, it seems more feasible and practicable to leave the decision on each nomination to the committee who shall judge according to individual merit which may be one or more attainments as length of service, type of service, contribution to the literature of physical education, success in research, outstanding successful effort in organization and administration, etc.

It is also a recommendation of the committee that Fellowships be conferred by the American Physical Education Association upon scientists, educators, and others in allied fields of science and education who have by their thinking and labors contributed signally to the cause of physical education.

It is the recommendation of the committee that membership in the American Physical Education Association should not be one of the requirements of qualifications established for selection.

Manner of Selection and Election

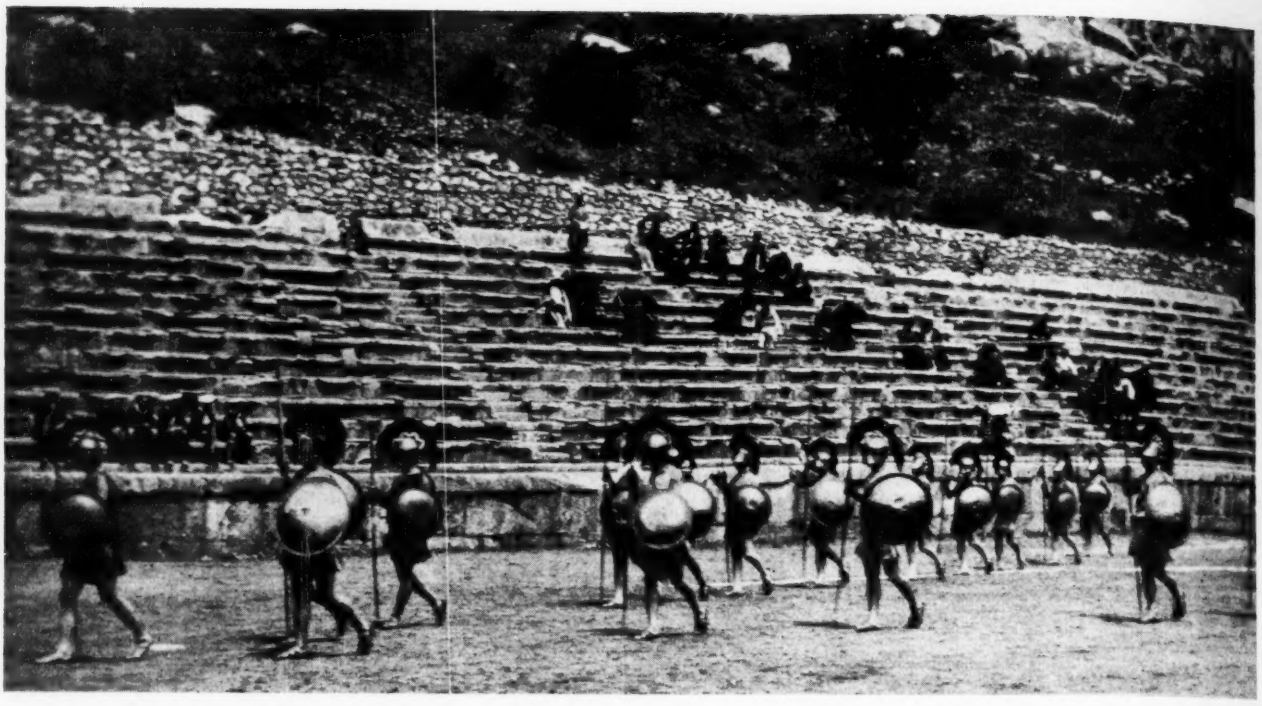
The procedure recommended is as follows:

1. Nomination by any member of the American Physical Education Association.

(Concluded on page 51)

The American Physical Education Association
Has Elected

Fellow in Physical Education
As an award of honor in recognition of distinguished service in the cause of physical education.



PARTICIPANTS IN MACEDONIAN WAR DANCE ON DRESS PARADE PREVIOUS TO SPECTACLE

The Modern Delphic Games

By

LEWIS W. RIESS

Director of Y. M. C. A., Saloniki, Greece, and Editor of Bulletin of the European Y. M. C. A. Physical Directors' Society

THOSE who were privileged to witness the second of the revived Delphic Festivals which took place in the ancient Theatre and Stadium at Delphi during the first two weeks of May, had a wonderful, unique and unforgettable experience.

The first modern Delphic Festival took place in May, 1927 and was the realization of the long cherished dream of Mr. and Mrs. Angelo Sikelianos, a Greek poet and his American wife, to stage the plays of the ancient dramatists in the Delphic Theatre and to hold the games of ancient times in the well-preserved stadium, thereby bringing all Greece together and making Delphi once more a place of importance as an object of pilgrimage.

THE SALONIKI BOYS DOING THE MACEDONIAN WAR DANCE

The plays chosen for the 1930 Festival were "Prometheus Bound" and "The Suppliant Maidens," both by the great Aeschylus. The games were arranged in reproduction of the old games in so far as it was possible to arrange the program. Plays and games took three days; the first two devoted to the dramas, and the third day—as in ancient times—the day of the games. The whole Festival was marvelous. Here one can only attempt to give a brief description of the games.

The ancient stadium is in a state of good preservation and holds about 5,000 people. For the three cycles of the festival about eight thousand visitors attended in groups of two thousand for the first presenta-

THE STADIUM AT DELPHI

tion, and approximately three thousand at each of the other two. The athletes entered a stadium filled with an audience of thousands of eager spectators. First came the parade of the athletes dressed in the short, graceful chiton of coarse handwoven silk in rich colors; then followed the warriors in full war regalia consisting of breastplate, shield and plumed helmet, a short sword at the waist and a long spear. Under the armor they also wore the colorful chiton. All wore the sandals of the ancients. With the sun shining brightly upon the gleaming armor and the bronzed bodies, the sight was one to stir the imagination of the most phlegmatic.

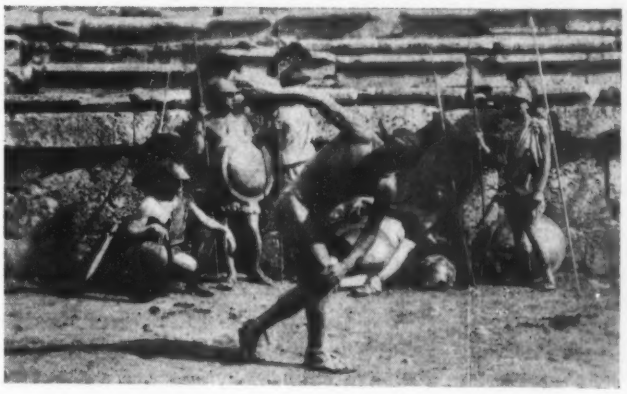
Following the stirring entrance ot the participants, the athletes' oath was given and the pentathlon competitors were called to take their places. Dropping the chiton, they stood stripped of all but a loin cloth (a concession to the taste of today; the ancients were in the nude, of course). They made a fine spectacle—those splendid Greek types. As there were no records kept in the olden days, none were kept on this occasion. The man who jumped the farthest or ran the fastest was proclaimed the winner after he successfully contested for his title in a wrestling match. After the placing of the laurel wreath upon the brow of the winning athletes of the pentathlon, the palestra games took place.

The palestra games consisted of exhibitions of such events as jumping, running, discus and javelin throwing, ball games, archery contests, etc.

Following these games, there was a race of the warriors in full armor. The program concluded with the Macedonian War Dance and the Phyrician dance—two blood-stirring events which brought down a thunder of applause.

After the athletic events, an exhibition of horsemanship was staged—the riders riding bareback in their short robes. The whole spectacle was received with wild enthusiasm. The old stadium so silent for 1700 years re-echoed to the frantic applause of the multitude of pilgrims from all over the world. Mr. and Mrs. Sikelianos and Mr. Benakis, the president of the committee, were carried on the shields of the warriors amid the cheers of the crowd.

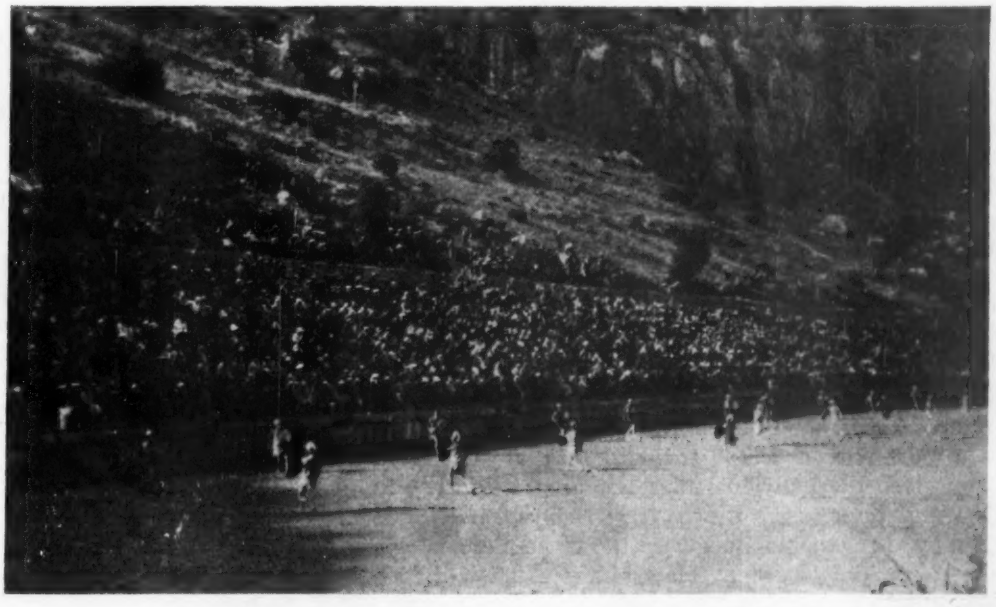
Greece is awakening to the wonderful possibilities of using her ancient theatres and stadiums for revivals of the classical plays and games. It is planned to hold the Delphic Festival every two or three years; and in the alternate years spectacles will be staged in such theatres as the Dionysus at Athens and the great Theatre of Epidaurus, and games will be held in the stadia of Olympia and Athens.



MID-MOTION IN THE DISCUS THROW

The boys in the background await their turn in the Macedonian War Dance

(Concluded on page 57)



ANOTHER VIEW OF THE MACEDONIAN WAR DANCE

Test Scoring in Physical Education

Plans for Accurate "Measuring Sticks"

By

FREDERICK W. COZENS, PH. D.

Associate Professor of Physical Education
University of California, Los Angeles

THOSE of us who are interested in accurate and meaningful measuring "sticks" in physical education will realize that before a scale can be built several important points with regard to that scale must be considered:

1. The *Purpose and use* of the scale is our first problem. Is the measurement to be used for
   a. Noting the ability and progress of the pupil throughout the year; as a means of determining a final grade for promotion, or for a particular award or for honors;
   b. Classification and guidance;
   c. Diagnosis and remedial teaching;
   d. Motivation; or
   e. Research and experimentation?

   We may need one type of scale for showing progress and for purposes of motivation, but this type may be too cumbersome for purposes of classification.
2. What *range of ability* should be covered in the measurement program? Do we need to know more about the student than that he or she has attained a given standard? Should we have an accurate score for every possible performance or is such a detail a waste of time and effort?
3. Very serious consideration must be given to the *meaning of particular point values and to minimum and maximum awards.* Is our plan of scoring such that every point on the scale is meaningful? Is it clear just what is represented by the minimum and maximum awards? Can each point value on the scale be interpreted by every person who uses it?

These are some of the evident considerations.

In order to stimulate thought about those problems among our workers who are interested in measurement, it may be useful to briefly review the types of scoring plans which have been formulated. Despite the fact that correct statistical procedures have not been used in many cases, the various plans are worth while from the standpoint of suggesting ways and means of accomplishing desired ends. An attempt will also be made to point out the obvious advantages and disadvantages of each scheme.

I. *Pass or Fail.*

This method of scoring is very simple and provides for a single standard of performance to which the individual must attain if he wishes to qualify or pass. It may very readily be illustrated by the Athletic Badge Tests or the Philadelphia Age Aim Charts[1]. Thus in the Athletic Badge Test for Boys, the boy must run 50 yards in 8 seconds or better in order to qualify in the first test. In the Philadelphia Age Aim Charts, a boy to reach the aim of the 12 year olds should run the 50 yards in at least 8 1/5 seconds. This figure, 8 1/5 seconds, is the average time of 12 year old Philadelphia boys in the 50 yard dash.

It is very important that the standard set be definitely qualified so that every person may know what the figure represents. Is it the average, or what the top 30% can do or just what significance has it?

Advantage—Ease and speed of administration.
Disadvantage—Lack of motivation above and below the standard set.

II. *Success or failure.*

In instances where the test material is in the nature of stunts and does not lend itself readily to graduation by an objective method, this scheme may be used to advantage. The person either does the stunt or he doesn't. Brace has used this type of scoring in his scale of Motor Ability Tests.[2] In principle it differs but little from the "Pass or Fail Method."

Advantage—Ease and simplicity of scoring and administration.
Disadvantage—Lack of motivation within the range of performance, that is, a record is not made as to how close the individual comes to the passing mark. It seems desirable to show the spread of performance wherever possible.

III. *Minimum Standard with Additional Points for Better Performance.*

Such a scheme as this is one of the earliest methods of scoring and is reported as far back as 1894 by the Gymnastic Societies of Cleveland[3] in their plan to secure the participation of large groups. In putting the 16 lb. shot for example, 1 point was given for a put of 18 feet and one point given for every additional foot.

Reilly uses this method also in his scheme for scoring the Rational Athletic Program for Boys and Girls.[4] In the Standing Broad Jump (Junior division) a minimum standard for class A boys is 4 ft. 6 in. For this performance the boy gets 5 points with 2 additional points for every 3 inches over the standard up to a maximum of 15 points.

Care must be taken in a scheme such as this to see

[1] See Bovard, J. F. and Cozens, F. W.—Tests and Measurements in Physical Education. P. 45, 50. Univ. of Oregon Press, September 1926.

[2] Brace, D. K.—Measuring Motor Ability. A. S. Barnes and Co., 1927.

[3] See Class Pentathlon. Mind and Body, Vol. 1, No. 8, p. 7-10, October, 1894.

[4] See Reilly, F. J.—New Rational Athletics for Boys and Girls, p. 104-5. D. C. Heath and Co., 1917.

that the minimum standard awards in all events represent the same relative performance and that the additional points do not accumulate faster in one event than another. In other words, the increments mentioned in the various events must be equalized. Does one-fifth second in the 40 yard dash represent the same relative performance as three inches in the standing broad jump?

Advantage—Performances over the minimum standard may be rewarded.

Disadvantage—Lack of award of inferior performances.

IV. *Minimum Standards for Three or More Classes or Groups.*

This type of scoring corresponds somewhat roughly to the academic grading schemes of many schools, that is, Grades A, B, C, D, or 1, 2, 3, etc. Thus the University of California Efficiency Test[5] as originally set up by Professor Kleeberger has three standards for each event which group the men into 3 classes—passing, average, and good. The Ohio State plan[6] divides men into four classes setting standards for each. Thus to be in Grade A in the high jump, the man must clear 4 ft. 6 in., for B, 3 ft. 10 in., for C, 3 ft. 6 in., and for D, less than 3 ft. 6 in.

It is important in scoring systems of this type that the meaning of each class be made clear. In Cozen's General Athletic Ability Test for College Men,[7] when he divides men into 5 classes on the basis of total score, the division points are set forth as certain distances from the mean measured in standard deviation units of the distribution. These classes can then be thought of as representing certain percentages of all men measured. Thus the superior group is the upper 3½%, the above average group the next 24%, the average group the middle 45%, and so on.

Advantage—A rough classification is possible covering the entire range of performance.

Disadvantage—The performance levels are so far apart that fine distinctions in performance within each group are not possible.

V. *Percentage Standards.*

Closely associated with the scheme as outlined in IV. comes the percentage standard type of scoring. Thus in the test which Metcalf proposed to the Society of Directors of Physical Education in Colleges,[8] he indicates certain standards which ought to be attained first by 90-95% of college men, then by 50-60% and finally by 20-25%.

The Los Angeles Achievement Expectancy Tables[9] present a more elaborate scheme. For example, in the Running Broad Jump for the Fifth Grade, standards are listed for 9, 10, 11, 12 and 13 yr. old boys for the following

Superior	10%
Upper	20%
Middle	40%
Lower	20%
Lowest	10%

This procedure makes the table of standards very meaningful. A teacher can tell at a glance just where her pupils stand in relation to all boys of the given age and grade. Thus, if a boy of 11 in the fifth grade jumps 10 ft. 9 in., we know immediately that his performance lies about in the middle of the upper 20%.

The advantages and disadvantages of this method are in the same class as the scheme outlined under IV.

VI. *Straight Point System Beginning at Zero.*

Until recently this has been the favorite type of scoring scheme. Starting from a zero award for a given performance the point scale increases by one, five or ten points while the performance scale increases by even increments. Thus in the Scoring Tables for Boys Athletic Events (National Motor Ability Committee),[10] the scale for 10th yr. upward in the 40 yard dash runs as follows:

Points	40 yds. Seconds and Fifths
0	7-2
10	7-1
20	7-0
30	6-4
40	6-3
50	6-2
60	6-1
70	6-0
80	5-4
90	5-3
100	5-2

The same pertinent caution should be observed here as has been previously pointed out, namely, that we must know upon what principle the scale is based, where it starts and what each 10 point rise means. In the example cited, what does the zero performance of 7 2/5 seconds represent? Is it what the average of 10 year old boys can do or what only 25% can do? Also what does the 100 point performance represent? Some scales of this type are formulated about as follows:—the zero performance represents inferior ability and the 100 point performance exceptional ability. From these two at opposite ends of the scale, intermediate values are rather arbitrarily assigned. It can be clearly seen that such a procedure is unscientific and absolutely meaningless.

A much more accurate method of determining the point values would be to put them on a percentile basis,

(Continued on page 52)

[5] Kleeberger, Frank L.—Physical Efficiency Tests as a Practical Means of Popularizing Physical Education at the University of California. Am. Phys. Ed. Rev. 22:551 (December, 1917) and 23:27 (January 1918).

[6] Nichols, J. H.—Efficiency Tests at Ohio State University. Am. Phys. Ed. Rev. 25:211 (May, 1920).

[7] Cozens, F. W.—The Measurement of General Athletic Ability in College Men, p. 172. Univ. of Oregon Press, April, 1929.

[8] Metcalf, I. N.—Standards and Tests in Physical Education. Am. Phys. Ed. Rev. 27:320 (September, 1922).

[9] Published by the Department of Physical Education and Athletics, Los Angeles City Schools.

[10] Report of the National Committee on Motor Ability Tests, Am. Phys. Ed. Assoc., March, 1926.

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The Relation of Recreation to Vocation

PHYSICAL Education has often been accused of claiming too many objectives. The editor has never been convinced that the claims of our profession have been extreme, although he is quite ready to agree that many of the objectives have failed in their fulfillment, owing to inadequate programs or faulty emphasis. Nevertheless, the possibilities of attainment still remain.

It is this faith that justifies the addition of a new objective to the many that have both been accepted and disputed. In short, there seems to be every indication that Physical Education will more and more become an assisting factor in vocational guidance. This new approach to measuring the child's vocational tendencies has one advantage over all other approaches in that it considers the spontaneous activities of the child, that is, his self-chosen and self-directed activities, which after all, are more apt to be the true guides to his interests, capacity, and character. Too many of the vocational approaches of the past have placed the child in artificial situations and therefore have failed to obtain the desired results.

Because he is strongly convinced of this position, the editor takes the opportunity to present to the JOURNAL readers the substance of a recent radio talk dealing with his studies on this subject.

The Recreations of Students as a Factor in Vocational Guidance

The average parent will quite readily agree to the idea that the courses his son or daughter elects in school will be an influencing factor in his later vocation. He will agree even more readily that the subjects his child particularly *likes* will be a *much greater* determining factor. What would this same parent say, however, if he were told that his child's recreations are indicative of a later choice of lifework?

Possibly some observant father has noticed his son negotiating a profitable stamp trade and has decided that a shrewd business man was in the making; or has stood by while his Boy Scout son put a splint on an injured dog and has visioned a future surgeon in the family; or has proudly watched his son manipulate the homemade radio and has planned an Engineering course in college for him. If so, the parent might be willing to concede that recreational activities have some relation to vocation.

This conclusion that there is a decided relationship between an individual's play and his later choice of a career, was brought to my attention rather unexpectedly while engaged in a survey of the recreations of the University students. The findings of this study showed to a surprising extent that each department, such as Law, Engineering, Medicine, etc., had its own special recreational interests. This led to the new point of view that if the profession showed a type for recreation, then undoubtedly, vice versa, the recreation would furnish an index to the profession. This conclusion was strengthened by a reading of the work of a Swiss psychologist, Pierre Bovet, in which he drew the same parallel, pointing out as one example that diplomats were usually tennis players. He stated that tennis, like diplomacy, is a game of give and take. It is also a well mannered contest, depending on ability and skill; a balanced sport as well as a fighting one. Spurred on by this suggestion, I began to make a more scientific study of student interests. As a result, the records of over five thousand entering men students have been studied during the last four years. This is a mere beginning, for we feel that the results will become increasingly accurate and significant as larger totals are obtained.

With the evidence from these sources, we were able to get a fairly clear picture of the preferred recreations of the students in each department.

To be more explicit, the students of Law and of Journalism, whose interests are very similar, indicated as a group decided preferences for class room subjects of social nature such as History, English, Languages, Economics, Sociology, and Civics, and at the same time for recreations of the social type such as school debating, dramatics, newspapers and publications, politics, and parties. In physical activities, they preferred the type of athletics which is usually featured by country clubs—to be exact, golf, tennis, swimming, handball, dancing, etc. In passing it might be added that these students are the greatest "joiners" on the campus and participate in a larger number of school activities than any other group.

In contrast to the Laws, the Engineering students show an entirely different line of interests. Their interests run to physical properties and to natural phenomena rather than social. They are apt to dislike History, English, and Language; but to enjoy Mathematics, Physics, Chemistry, Manual Training, and Mechanical Drawing. They are especially interested in experimental and collecting hobbies. These hobbies closely resemble their work. It is a small jump from model aeroplanes to aeronautics; from homemade wireless and radio sets to electrical engineering. In their active sports, the engineering students as a group prefer the

informal type, such as swimming, hunting, fishing, skating, skiing and hiking. While many as individuals may take part in organized games like football and basketball, their interests, totalled as a group, fall below the average in these sports. Even within the Engineering groups, differences can be defined; for example, the Civil Engineer, whose work is to be of a vigorous, outdoor nature, has a stronger preference for outdoor sports than the Electrical Engineer whose work is necessarily more confining. The architect, who is an associate member of the Engineering School, differs in that he has a smaller variety of interests and concentrates heavily on them, particularly on hobbies of an artistic nature.

The Physical Education student, whose training has largely been in big muscle games, seldom expresses a preference for manual training or shop work. From the standpoint of enjoying an active outdoor life, the Physical Education group and the Forestry groups are quite similar. But they do differ radically in *their choice* of sports! The Physical Education group stands head and shoulders above other groups in their liking for team games. The Foresters, on the other hand, are outstanding in their liking for informal recreations, such as camping, woodcraft, scouting, boating, hunting, and fishing. Both, however, have a very decided liking for physical activities.

Boys taking the Business Administration course and those taking the Literary course show but small differences when compared as groups. This is easy to understand because many of the Literary students intend to enter business upon graduation. Both of these groups run above the average in their liking for participation in school activities and in active sports; and they have a decided preference for the social studies and the languages.

The Medical student really presents a problem—not that he does not enter into recreations but rather because he is average in all his recreative interests. In his studies he does show a decided liking for the sciences of Chemistry, Biology, Physics, and Mathematics, but in his activities and recreations he is neutral. This might be construed as a trait peculiar to the profession as physicians must be willing to sacrifice their leisure to the demands of their work. They do take part in varied activities when time permits but as a group do not grow enthusiastic about any one.

The Dental students are somewhat similar to the Medical group in their liking for the sciences; but in activities and recreations, however, they are more like the students in the Business and Literary Colleges.

The future teachers, as would be expected, differ largely among themselves in the subjects they like and are planning to teach. From the standpoint of school subjects they do not form a uniform group in their likes as do the other professions. When, however, we turn to school activities and recreations, we find a distinctive type in this respect: of all groups they participate least in number of activities and amount of time spent upon them. Whether this is because the teacher is naturally retiring or whether he grinds on his subjects to the exclusion of other school interests, I am not prepared to say. In particular, his physical interests are few; and, if anything, his participation in school activities is likely to be found in school plays, debating, science clubs and musical organizations.

I have purposely limited my talk to statistics about boys. Since I have collected fewer case studies of women students, I am not prepared to state conclusions about them. It would seem that the women students entering certain professions show the same general likings for studies and recreations as the men in the same field. Each year shows a larger percentage of women entering the professions and so it will be important to collect more scientific evidence of their interests.

I feel that the conclusions I have been attempting to draw are further substantiated by the fact that the boy who is entirely undecided about the course he wishes to select is invariably without strong leanings either in studies or in his out-of-school activities. His record is therefore colorless. I feel nevertheless that even in such a case his interests—or lack of interests—will link him closer to certain groups than to others. We have tabulated results for fourteen different fields of specialization, and by throwing out the lower levels, this student would be assisted by the process of elimination, even though his decision would still have to be made from a number of apparently close choices.

On the other hand, the boy who is especially brilliant at anything he undertakes, will be guided immensely by his recreational analysis. This boy is apt to present A's in all the subjects that he takes and all the activities that he undertakes so that it would be hard to say which vocation would be most pleasurable. He would no doubt make good in any that he entered. Therefore a study based on the activities to which he would naturally gravitate if left to himself will be most illuminating.

Before concluding this discussion, I want to point out that not only does the evidence indicate a close relationship between recreations and professions in the school period of life, but there is every indication that a strong connection between the two will be found in actual business and professional life. Consequently, if a certain profession shows that its members favor certain types of recreation more than others it would behoove the specializing student to acquire a proficiency in them if he has not already done so. No doubt the fact that the members of a certain profession for the most part are alike in their recreations shows that the latter satisfy a certain need in the way of a well rounded life. It is not at all presumptuous to state that psychologists in the future may so analyze each vocation from the standpoint of its enrichment of life that certain recreations may be prescribed to compensate for any deficiencies the vocation may present. Any marked repressions or narrowing influences will thus be balanced by a program of recreational interests. This possibility grows stronger as we note the rapidly increasing hours of leisure and the consequent necessity of cultivating wholesome leisure-time interests.

PHYSIOLOGY
at the Service of
PHYSICAL EDUCATION

ARTHUR H STEINHAUS

Professor of Physiology and Director of the Y.M.C.A. Laboratory for Physiologic Research in Physical Education, Chicago

3. Two Unusual Experiments Which Throw Light on the Nature of Fatigue

The series of which this article is one is an attempt to present and interpret to physical educators the results of some recent researches in Physiology which to the writer seem of importance to Physical Education. The articles cannot lay claim to scientific thoroughness. They must rely on their simplicity and essential accuracy to commend them to the reader. The bibliographical references should serve as starting points for any who desire to equip themselves with fuller information.

IF the amount of blood going to the brain were reduced would a person tire more quickly—let us say while running? In all experiments on fatigue a most important problem is that of measuring its onset and progress. Some German workers have shown that as an animal grows tired it consumes more and more oxygen for performing a certain amount of work. Thus, for example, at the start and for the first forty minutes of a running period a certain dog used about 39.5 cc of oxygen for each 100 meters of running, while after 85 minutes of running he needed 72 cc for each 100 meters. (The consumption of oxygen is directly proportional to the amount of food consumed and energy liberated). It is as though when you started on a long trip your automobile gave you 20 miles per gallon of gas, and then after the first hour passed your mileage gradually began to drop to 10 miles to the gallon or even less. After a rest, of course, the dog's "mileage performance" returns to the original level. Because there is this gradual increase in the "work cost" as the animal grows tired, the degree of this increase has been taken as a signal of the onset and progress of the fatigue.

It is this criterion of fatigue which was employed in the first experiment I wish to discuss. It was performed by Kiyoshi Horiuchi of Tokio while working in the Kaiser-Wilhelm-Institute für Arbeitsphysiologie and the physiological laboratory der Deutschen Hochschule für Leibesübungen in Berlin. In order to be able to reduce, at will, the amount of blood going to the head of a dog he performed a most unique operation. First he opened the dog's neck between the sternocleidomastoid and trapezius muscles and tied off both vertebral arteries just below their point of entrance to the vertebral column. The dog recovered completely, evidently getting enough blood through the remaining carotid arteries. Now in a second operation he exposed the carotids and attached some kind of a special cylindrical screw clamp developed by R. Herbst (1928) to each artery. The incisions healed around the clamps and then it was only necessary to turn a thumb screw in the exposed end of the clamp in order to compress the arteries. Thus he could regulate the amount of blood going to the brain. Before even the first operation he had taught his dogs to run with a muzzle on their snouts. By connecting this air tight muzzle with a regular respiration apparatus it was possible to measure the oxygen consumed for each 100 meters run and thus observe the onset of fatigue as already described. His findings may be stated simply. Fatigue always came sooner when the clamps were tightened on one or both carotids than when the flow of blood was unimpeded. The tighter he screwed the clamps the more quickly did fatigue appear. Of course, under no circumstances did he completely clamp off both carotids at once. He thinks that this lowered blood supply and therefore reduced oxygen delivery to the brain resulted in the accumulation of waste products in the brain which interfered with some of the association centers responsible for the finer gradations of muscular activity. This led to poorer neuromuscular coordination and the early fatigue as evidenced by increased work cost. He thinks that something similar to this takes place and is responsible for the quicker fatigue experienced when work is done in the standing position as compared with the same work done while sitting. In this case the stagnation of blood in lower body parts, he thinks, is in part responsible for a poorer blood supply to the brain.

The second experiment was performed by Zuravlev and Feldman in Charkov, Ukraine. Everyone is familiar with the kind of tracing which one secures when a single muscle or a group of muscles is contracted repeatedly. For a while the lines indicating the degree of contraction are high, then gradually and regularly they grow shorter until the muscle will respond no more and the line has a zero length. Let us say that one exercises the middle finger in this way on what is known as Mosso's ergograph. If, while the contractions get weaker and weaker, one stops to rest for a minute, the contractions will on resumption of work be much stronger. In other words there has been some recovery from this fatigue. The question now is this: Is this fatigue and the recovery due to changes in the muscle or in the brain or other nerve centers? To throw light on this problem these investigators did the following experiment. In the midst of a period of contractions, as signs of fatigue were coming on, they simultaneously stopped the exercise for one minute and blew up a sort of blood pressure apparatus cuff which had been placed around the upper arm and which served to compress blood vessels in the arm. Now the brain could rest but the muscle got no fresh blood and therefore could not recover. They reasoned that if the fatigue was due to changes in the central nervous system, then upon resumption of work after the minute of rest there should be stronger contractions for a while at least; whereas if the fatigue changes were in the muscle which had no opportunity for recuperation, the contractions should continue from where they left off

(Concluded on page 57)

Around the Country with J. E. Rogers

A. E. Kindervater, Supervisor of Physical Education for the Public Schools of St. Louis, Mo., tells me that I was all wrong in announcing his resignation in the November issue of the Journal. Instead, he is very much on the job and says that things are busier than ever. I therefore wish to make amends for this inadvertence, which was caused by confusion in the reports that came to me of positions filled at Kansas City and Cincinnati this fall.

* * *

Dr. Frederick Rand Rogers' slogan "Graded programs adapted to individual needs" is progressing well in New York State. Cities like Buffalo, Rochester, Albany, Troy and others give their students health and physical education tests, which classify them according to their physical needs. Classes are formed to adapt the programs to the particular group. This is progressive physical education.

* * *

Dr. A. P. Way, who has been connected with the New York City Public Schools for a good many years, and who is one of the founders and organizers of the City Directors of Physical Education is now completing a health education text for the secondary schools. There is great need for a good health education text book for the senior high school.

* * *

A. W. Hobt of the University of Tennessee and A. D. Browne of George Peabody are organizing a Tennessee State Physical Education Association.

* * *

California has formed an association of health, physical education and recreation.

* * *

Alden Thompson, State Director of Physical Education in Michigan is developing a splendid health and physical education program in connection with the teacher colleges. Mr. Thompson says:

"Our Health Education program is going along fine. Each of our Teacher Colleges now has a special health education instructor and we have both an eight grade and a twelve grade Course of Study in Health Education. The former is set up particularly for the rural schools. We have brought outstanding people into the state and have a foundation of cooperative attitudes on the part of our Teacher Training Institutions which guarantees solid progress in this line. Miss Alice Evans of the University of Michigan is to be at Western State Teachers College, Kalamazoo; Dr. Glenadine Snow of Michigan State Normal College will be in this office; Miss Mary Hahn of the Illinois State Department of Health will be at Michigan State Normal College, Ypsilanti; Miss Ida Haskins of the Mansfield Health Education Program will be at Central State Teachers College, Mount Pleasant; and Mr. Arthur Davis of Lincoln Park, Michigan, will be at Northern State Teachers College, Marquette. In addition Miss Mary Spencer is to have charge of similar work in the Marygrove College at Detroit (a Catholic Girls College) and Miss Elma Rood of Peabody College, Tennessee, will be in charge of the intensive work which the Michigan Children's Fund will do in twenty-five selected counties. You see thus that we have in this office now a real Foursquare Program; namely, health instruction and health service (both teacher training and school program), Physical education activity and interscholastic athletics."

* * *

Miss Jessie Garrison has been appointed Acting Director of the Division of Physical and Health Education in Alabama.

* * *

Criticism of Australian youth recently made by Dr. C. G. McAdam, vice-president of the Victorian Amateur Athletic Association, is very similar to that made in Britain. "Thousands of Australian youths," said Dr. McAdam, "are filling the role of spectators at football, and cricket matches and race meetings. Their time would be better employed in some healthy form of athletic sport."

To support his contention Dr. McAdam stated that in a recent examination of 1,200 boys between the ages of eight and eighteen he found that only 10 per cent were physically fit. "Physical pre-eminence is too often taken for granted by Australians," added the doctor. "In reality, I doubt whether the Australians, as a race, are superior physically either to the Americans or the English. During the great war I served with the Imperial forces, and I am not convinced that the physical fitness of the men about me was inferior to that of the Anzacs. We are too apt to make stature a criterion of health, and thereby are led to boast our incomparable health."

* * *

[B. E. Bayh, in charge of physical education in Terre Haute, Indiana, has developed a splendidly well balanced physical education program, with a keen interest in intramural activities.

* * *

There has been a tremendous growth in intramural sports in universities and colleges over the country. There is also a most rapid growth among the high schools. The University of Michigan has just published a splendid handbook of intramural sports. This is a complete statement of the organization and administration of intramurals and should be most helpful to anyone who wishes to become an expert in intramural sports.

* * *

Most states have state physical education associations. Three states are now planning to form such an association, namely, California, Tennessee and Illinois. N. P. Neilson and Prof. W. R. LaPorte are interested in California; A. W. Hobt and A. D. Browne, in Tennesee; and Louis Kulcinski and Dr. S. C. Staley in Illinois.

* * *

Mr. A. Lester Crapser of East Stroudsburg, Pa., is completing the study on the National Physical Achievement Standards for the Committee of Eleven. Some ten cities have sent in their tests to Mr. Crapser and he is making a compilation of the results of some 30,000 participants.

* * *

Resolutions of interest adopted by the National Education Association at Columbus and published in the Journal of the National Education Association for October, 1930, are:

"Athletics—The National Education Association believes that every child is entitled to an all round physical education. It deplores any commercialization of school and college athletics.

"Enrichment of human life—The National Education Association commends the work of the National Commission on the Enrichment of Adult Iife. It urges all schools to consider the contribution they can make to the enrichment of life and the wise use of leisure."

* * *

V. S. Blanchard of Detroit is now the leader of some 600 full time physical education teachers. He will be our host at the National and Mid-west meeting of the American Physical Education Association. Detroit will have much to show the delegates.

* * *

The National Tuberculosis Association, 370 Seventh Avenue, New York, has published a pamphlet entitled "Rest and Sleep, Why We Need Them," by Nora L. Reynolds.

* * *

Henry M. Foster, Professor of Physical Education at the University of Washington has published a splendid syllabus on the Principles of Physical Education. It contains questions for discussion, with reading references and topics for papers. This is a helpful outline to anyone teaching physical education.

Mr. N. P. Neilson, California state director of physical education, has published a splendid statement "A Curriculum for the Professional Preparation of Physical Education Teachers for Secondary Schools." This Bulletin E-1 is a compilation of some forty experts who have been working for over two years to present this scientific statement. It is a valuable contribution to teacher training.

* * *

The Society of State Directors of Physical and Health Education will meet during the Christmas holidays in New York, and arrangements are being made to meet jointly with the Society of College Directors and the Student Health Association.

Interpretive Rhythms in the Grades

An Elementary Physical Education Program

By

FLORENCE OWENS

Physical Education Department, Duluth, Minnesota

RESPONSE to music, which is an essential part of any physical education program, may be classified into two main divisions. The first type, and the one most commonly used, is that in which some ready made pattern is imposed on the class. The children are expected to follow the music according to directions already outlined, as in folk dances, singing games and couple dances.

The natural or interpretive rhythmic activities permit unlimited opportunities for the child to express himself. The principal aim of this type of work is to allow the child to free himself of self-consciousness and to allow him to create something which is his very own. It tends to develop his imagination and his ingenuity.

Good music is of paramount importance in interpretive rhythms. It should be simple, the same phrase should recur several times in a short selection, and there must be a contrasting note or phrase for dramatic emphasis. The selection should be short so that the child does not tire mentally or physically; and lastly, and of most importance, it must be childlike.

In developing childish dance patterns the teacher should realize that there is what may be called a vocabulary of movements which is of great value in interpreting the rhythm of the music. These are all bodily responses used to keep the rhythm. Some of them may be combined or used one after the other. There is no definite sequence to these movements given, so it must be understood that one should not attempt going through the entire list. Types of movements used will depend on the background of the child.

Walking—In place; on tip toes; stamping.

Forward and backward—On toes; on heels; with high knees.

Running—Raising feet in back; raising knees in front; leaping (long running steps).

Sliding—Facing forward; facing sideward.

Jumping—Forward; backward; sideward; with bent knees (rabbit).

Hopping.

Skipping—Knees high; knees stiff; with arms swinging in front of body; with arm swinging parallel to body.

Galloping—Running, keeping one foot ahead of the other.

Crawling—Slowly; fast.

Bouncing—Springing from ankles.

Rolling.

Nodding—Sideward; forward and backward.

Clapping—Bringing hands together in a horizontal plane; bringing hands together in a vertical plane.

Tapping—Desk; floor.

Swaying—Entire body, arms overhead or relaxed.

Arm Swinging—Across front of body; forward and backward; arms overhead, swaying with body.

Knees bending—Feet on floor.

Folding and unfolding—Body relaxing forward, suggesting flowers folding up.

The movements used will always depend on the character of the music. The mood may be gay and buoyant or plaintive and questioning. It may be slow or fast; heavy or light; loud or soft. The children should catch this mood and respond in their own way in preference to following dictated directions.

Transition from one mood to another may be shown by a change of movement. For instance, a selection may start out slowly and sadly and change to something happy and fast. This may be shown by a slow walk changing to a skip. Interpretation of other changes in moods may be shown by a leaping run ending in a whirl; unfolding flowers followed by swaying in the wind; and countless others which will come naturally out of a rhythm lesson.

Children may make the interpretation through some bodily movement such as running, skipping, jumping, etc. This is a primary response involving, principally, the keeping of good rhythm and is the foundation of all good rhythmic expression.

The class may be asked to tell what the music suggests in a story form, such as the "wind whistling through the trees"—"brownies creeping through the woods,"—"a train stopping at a station." This we will call the "story" or "theme" interpretation.

The third response is the bare expression of the mood of the music without any definite analysis. The children are asked to do just what they "feel" like doing; of course, with the understanding that they must express the mood of the music.

Properties may be used to stimulate lightness of action and color of mood. Large rubber balls add much to a program. Well inflated balloons may be tossed in the air and kept up with a gentle motion of the finger tips. A balloon tossed high in the air suggests very well the climax of a short musical selection. Bright colored scarves of silk or cheesecloth make very good devices for stimulating big movements and eliminating the possibility of self-consciousness. Flowers may be strewn on the floor. In picking them up, good trunk action is furthered.

In conducting a class in natural rhythms it is best to have the children remove at least their shoes, and if possible, their stockings. The class should begin with a warming up period when the entire group will re-

(Concluded on page 42)

Western Conference Football Strategy

A Review of the 1930 Season

By

G. S. LOWMAN

Professor of Physical Education
University of Wisconsin

IN my estimation the type of football, both offensively and defensively, shown during the 1930 season, has been superior to that of previous seasons. The resourcefulness and ingenuity of coaches in the development of possibilities which the modern game affords has been quite marked.

While the types of attack have not differed greatly from those of 1929, yet there have been some new innovations, and certainly more resourcefulness has been shown in both offensive and defensive tactics. There have been no radical rule changes for 1930 which might influence the style of play over the previous season, yet it has been evident that football mentors of the past season have attempted to bring out every possibility of the modern game. Whenever innovations have been introduced or improvements have been made in the attack, a resourceful defense has been developed to meet them.

The outstanding characteristic of the 1929 season was the fact that the offense in general was better than that of previous seasons. Coaches were so intense in the development of an attack that a tight defense was not greatly stressed. It was quite noticeable that the advantage for that season was with the offense. This might hold true, too, for the early part of the season just closed, particularly concerning the size of the scores of some of the earlier games. But as the season developed, and at the close of the season, it was found that the defense measured up equally with the offense.

IN the development of the attack for 1930, we find coaches giving time and intense interest to individual assignments, to timing of plays, proper alignment of interference, getting power ahead of the play, and effective blocking. The more open phases of the game have also been given increased attention. In my estimation the innovations, or the greater perfection or use of certain phases of the open game, have resulted in new strategy in the use of the long forward pass, or spot pass; a greater use of the lateral pass, developed to the weak side as well as to the strong side; the use of the lateral as a threat at all times to make other plays go; and the further improvement and use of laterals and forward passes from the spin play. While there is still that same attempt to get power ahead of the play, the offensive formations used this year afford more opportunities for running, passing, and the opening up of the lateral.

The lateral pass has now been accepted as a definite phase of offensive play, yet there are still greater developments in this play than have been brought out in the past season. Practically in every instance where the lateral pass has been used, it has been from off the running formation behind the line of scrimmage. Once or twice it has been used on the kick-off, but there has been very little attempt to use this play beyond the line of scrimmage, although occasionally during the season it was noticeable that trailing backs were in position to receive a backward pass in case a forward should be completed. One or two teams attempted a forward pass to be followed up by a lateral. While we recognize that there was a wider use of the lateral during the season of 1930, we may, nevertheless, within the very near future, expect the development of this play to extend beyond the line of scrimmage and to any situation on the field.

The double wingback formation with an unbalanced line seems to be gaining favor and was the accepted fundamental formation for six of the conference teams during the past season. This formation is usually an unbalanced line, ends close or slightly split away, the wingbacks one yard back and a little outside their respective ends, the fullback three and a half to four yards back of center, and the blocking back or quarterback about 2 yards behind the line and a little to the strong side. Quite often in this formation a backfield man is in motion before the ball is snapped.

The double wingback formation seems to be gaining favor throughout the country. It is a good bucking formation since it has a tendency to spread the defensive line; it lends itself well to both strong side and short side runs, particularly to reverses behind the line; and it is a good forward pass offense and well adapted to lateral passing as well as fake spinners. The quick kick is at all times a threat from this formation.

One school in the conference still maintains the traditional kick formation as its fundamental formation; one school uses the box formation of backs behind the center with a wide flanker; while two schools use the box formation of backs to the strong side. With the exception of the one school which uses the kick formation as the fundamental formation, there has been very little use made of this formation except for the kick itself. Occasionally passes have been made from this formation as well as short plunges into the line, but the kick formation has not been used by all as a fundamental offensive formation. Three schools in the conference have used the spread kick formation in punting. There has been much evidence of the placing of kicks to out-of-bounds.

All the schools in the conference have the quick

Explanation of Football Diagrams on Opposite Page

DIAGRAM NO. 1

Shows a balanced line with a box formation on the right, ends slightly split away. Back No. 2 receives the pass from center, fakes a half spinner to back No. 1 then hits through the strong side just inside of the defensive tackle. Back No. 4 checks the end out, back No. 3 helps on the defensive tackle and the weak side guard leads the play.

DIAGRAM NO. 2

Shows back No. 2 making a fake pivot to the No. 1 back, completes the pivot, follows in behind the No. 1 back, and passes to the No. 3 back who has gone flat.

DIAGRAM NO. 3

Shows the No. 3 back receiving the ball from center who pivots to his left and fakes to give the ball to the No. 1 back for a plunge on tackle. No. 4 back helps on the defensive tackle. No. 2 back drives in close on the defensive end, to give the play the semblance of a mass-on tackle. The No. 3 back swings out to the strong side, and as he is about to be tackled he makes a lateral pass to the weak side end who has swung around deep.

DIAGRAM NO. 4

Shows a complete spinner to the weak side. No. 1 receives the ball from center, pivots to his right, and fakes to give the ball to the No. 2 back. No. 2 back fakes to the left to keep the defensive ends from coming in too sharp, the offensive left end ignores his tackle and goes through for the secondary. The right guard and the No. 3 back take the defensive tackle out. The No. 4 back fills up the hole left open by the right guard going out.

DIAGRAM NO. 5

Shows a balanced line, ends out about two yards, backs No. 3 and 4 one yard back of the line and just to the outside of their respective tackles. Backs No. 1 and 2 are four yards back of center on a parallel line, and quite close together. On the play shown, the No. 3 back starts in motion to his right, and just before he gets to the No. 4 back he hooks back for the ball to be snapped, then drives in on the defensive end. The No. 4 back helps take the defensive tackle out, the No. 2 back drives in close on the defensive tackle or the defensive end, the left guard leads the play, and the No. 1 back takes the ball inside the defensive tackle.

DIAGRAM NO. 6

Shows a lateral or backward pass. No. 2 back gets the ball from center, drives straight in, gives the ball to No. 4 back who makes a backward pass to the No. 1 back who swings out deep to the right. Left end and left tackle cut across for the secondary defense.

DIAGRAM NO. 7

Shows a forward pass; the ends go down deep and hook out, the No. 4 back goes down the middle deep and to the left, the No. 3 back hooks in short across behind the line.

DIAGRAM NO. 8

Shows the double wingback formation; the No. 1 back receives the ball from center, drives straight into the line about two steps, pivots and gives the ball to the weak side guard who swings to the right. The weak side guard in turn makes a lateral pass to the weak side wingback who swings around deep. The No. 2 back and the right guard take the defensive end. No. 4 back helps on the defensive tackle.

DIAGRAM NO. 9

Shows a forward lateral from the double wingback formation. The No. 1 back receives the ball from center, and the play starts with a strong side running play. No. 1 passes the ball forward to the weak side end who has cut across behind the defensive line. The weak side end then makes a lateral pass to the No. 4 or strong side wingback who has slipped by the line of scrimmage on the right.

DIAGRAM NO. 10

Shows a forward pass behind the line of scrimmage. No. 1 back receives the ball from center, starts a running play to his right. Right guard and No. 2 back take the defensive end. The ball is passed forward behind the line to the No. 3 wingback.

DIAGRAM NO. 11

Shows a weak side lateral. On this play the No. 4 back is in motion to the left and drives back on the defensive end. The weak side wingback helps on the tackle, and the strong side guard and the strong tackle swing to the weak side and mass on tackle. The No. 1 back receives the ball from center and follows interference for a mass on the weak side tackle, but just as he is about to be tackled he makes a lateral pass to the No. 2 back who has swung deep to the weak side.

DIAGRAM NO. 12

Shows a forward lateral from the double wingback formation. The No. 1 back makes a short pass to the No. 4 strong side wingback who has cut slightly in behind the defensive line. The left end swings across in behind the defensive line, behind the receiver of the forward pass, and takes a lateral from No. 4.

DIAGRAM NO. 13

Shows a strong short side play from the double wingback formation. The No. 3 back helps on the tackle. The right guard comes out to the left and takes the defensive end. The No. 1 back receives the ball from center, takes a step to his left, and follows the No. 2 back through between the weak side guard and the weak side tackle.

DIAGRAM NO. 14

Shows a forward lateral from the box formation on the right. The No. 1 back receives the ball from center and completes a short pass to the left end slightly in behind the defensive lines. The No. 3 back goes out to the weak side and receives the lateral from the left end who has received the forward pass.

DIAGRAM NO. 15

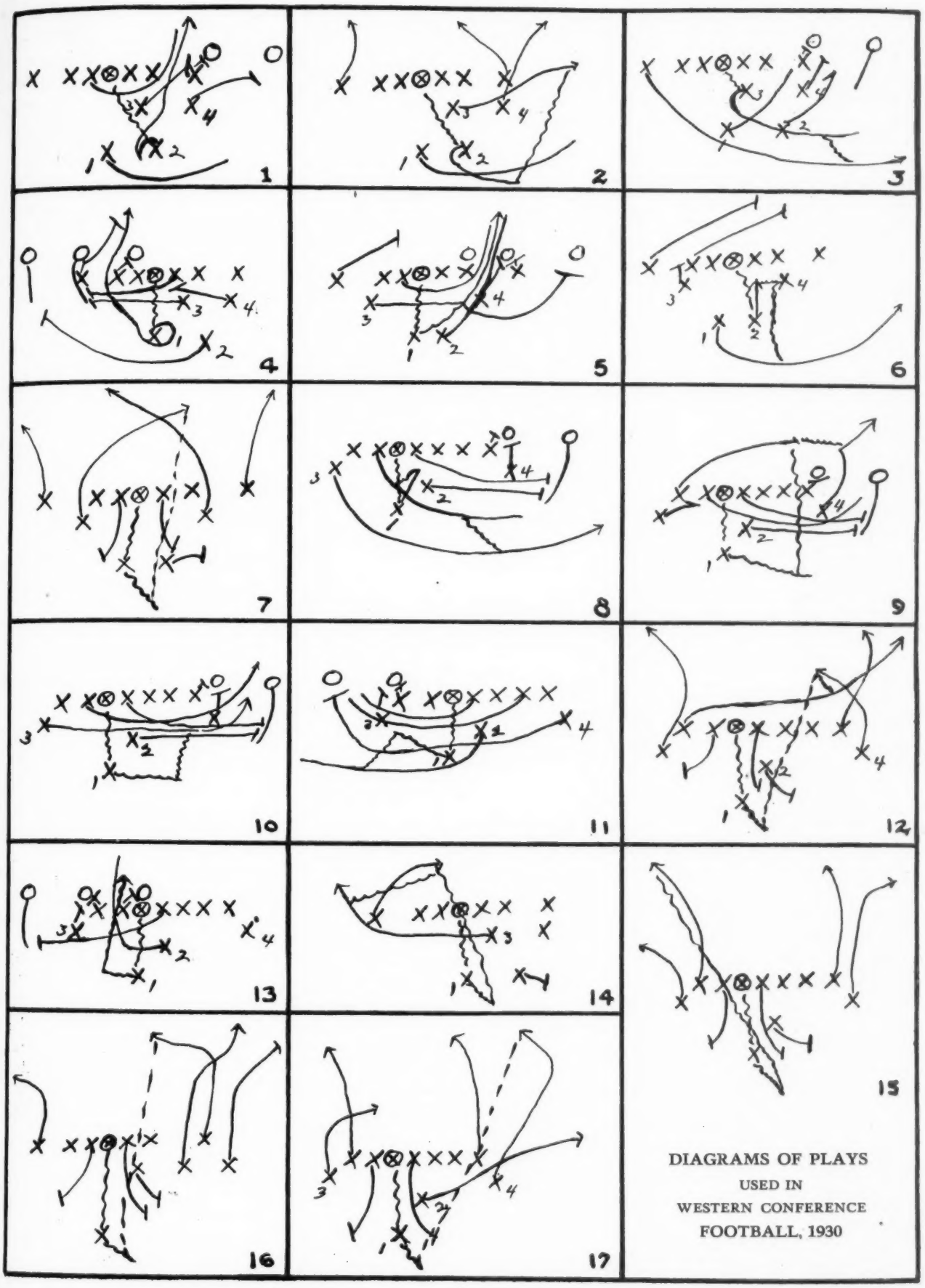
Shows a long spot pass over the secondary. This pass is made from a double wingback formation. The weak side wingback goes flat to the left. The strong side end and strong side wingback go straight down deep. The left end goes down deep and hooks a little to his left taking the ball at top speed.

DIAGRAM NO. 16

Shows a long spot pass from a special kick or pass formation. The right end, who is split away, and the No. 3 and No. 4 backs go straight down the field together for about 15 yards, then break quickly. In this instance the ball is passed to the right end who breaks to his left and receives the ball at full speed.

DIAGRAM NO. 17

Shows a long spot pass from the double wingback with five men out. Left end goes down deep and a little to his left. Right end goes down deep and slightly to his left. No. 3 back hooks in short behind the line. No. 2 back goes flat to the right, No. 4 back goes down deep and slightly to the right then hooks sharply to the left and receives the ball at full speed.



DIAGRAMS OF PLAYS
USED IN
WESTERN CONFERENCE
FOOTBALL, 1930

kick from the running formation, but this kick has not been used as much or as effectively as it was used in the 1929 season. This has been rather surprising because the special defenses which have been used during the past season, with the box defense of backs or the 3-2 position of backs, have afforded great opportunities for this play. Place kicks and drop kicks from the field have been very seldom attempted. It seems that there are but one or two schools in the conference that attempt to maintain this type of attack. With the ball on the two yard line following a touchdown some teams have attempted the additional point by the pass or plunge, yet kicking seems to be the favorite method.

Spread plays and open formations have largely been eliminated, although some teams, as I mentioned above, have used the spread kick formation, and one team has been very successful in using a wide flanker, and sometimes with a man in motion to the opposite side. On the return of kick-offs, the "V" or wedge formation taking the ball straight up the field seems to be the accepted method. Short kicks on the kick-off are practically "out" since the rule does not permit a recovered ball to be advanced.

On the double wingback formation there has been hardly any noticeable splitting away of the ends. However, the wingbacks have taken their position outside their respective ends, which would have a tendency to open up the defensive line and pave the way for fake spinners into the line. Where the wingback has position on the defensive tackle, strong offensive plays both inside and outside the defensive tackle have developed.

IN summarizing the 1930 offensive play, we find that the rushing attack consists of short end runs, going inside the defensive ends or back through tackle, mass plays on tackle, fullback plunges through the middle and also through the strong and the short side tackles. Quite often this fullback plunge is used with the fake spinner or with a step to the side in order to give the interference time to form and lead the play through the line. Fullback plunges were most always led through the line by an offensive back or a lineman. All plays outside of tackle were usually led by two linemen as well as the interfering backs.

Double and triple reverse plays with the linesmen out into the interference were much in evidence. The fake spinner and the full spinner were used both by the half and the fullback, and were used as much outside the defensive tackle as through the line and inside of tackle. Laterals and forward passes also developed from the spinner. Strong short side plays have been stressed more and more. These short side plays were reverses to the short side, short quick drives, or fullback bucks to the weak side following a fake spinner thus giving the strong side line or backs a chance to lead the play. Some cross blocking has been noticeable both on strong and short side plays. On the double wingback formation quite a number of fake plays have been built up around the quarterback or the blocking back who is two yards behind the line. There has been very little on the order of sweeping end runs except on the use of a wide lateral. During the past season the lateral has been developed to the short side as well as to the strong side.

The greatest development in the forward pass during the past season has been in the use of the long spot pass; also the use of this play on the first and second downs instead of waiting until the orthodox third down.

The forward pass this year has not been used so much as a chance play, but more discreetly and at the opportune time. Several games could be cited where this long pass was used as a definite scoring play. Several reasons might be advanced for the greater use of this long pass; namely, too much zone defense brought about by the six-man line and the 2-2-1 or the 3-2 position of backs, on the assumption that the defense must cover all zones and guard against the lateral at all times. But I believe that the main reason for the use of this pass has been the fact that the offense, recognizing the difficulty of scoring by means of a running attack inside the twenty yard line, (because of the tight defenses which have been developed in the scoring zone) has been attempting to score from outside the 30 yard line. The success of the long spot pass necessitates, of course, a good passer, protection for the passer, good timing, and a receiver who can handle the pass while going at full speed.

Particularly from the double wingback formation there has been evidence of attempted forward passes to a back or end behind the offensive line of scrimmage. And it has been quite evident, too, that teams are trying to build up a forward-lateral pass play as a definite offensive phase of attack, not just as a chance play. To my knowledge this play has been completed this year and has usually resulted in a long gain. We may expect improvement on this forward lateral for another year, as well as a more varied use of the lateral from the running formation. Lateral passes have been used to score during the past season, and will continue to be more effective in succeeding seasons.

In our summary for last season it was prophesied that the 1930 season would see the six-man line defense more generally used in order to meet the newer and more open developments of the attack. This prophecy was largely supported during the past season. Of course we know that the question of defense is largely one of meeting a special type of attack, and it is difficult to standardize a defense. Yet more teams of the conference used the six-man line than in previous years. During the past season we have noted the 6-2-2-1 defense, the 6-3-2 defense, and in one or two instances the 6-2-1-2 defense. Where the old seven-man line defense was used, the box defense of backs was more common than the diamond position of backs.

There are several reasons for the employment of the six-man line, and the 3-2 and 2-2-1 position of backs: namely, the threat of the lateral pass both to the strong and to the weak side; the man in motion; the development of strong short side plays, (the time has

(Continued on page 48)

Authentic Costumes for Folk Dances

By
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Spain

SPAIN still retains many traditional costumes, some derived from the Romans and others from the Moors. Reds and yellows are always found in the dress of the different provinces, although in the north of Spain they are more often than not combined with black or dark brown. The women appear in hats more so than the mantilla, and flowers are always in the hair of the working girl. The brown women of northern Spain, in their low-toned dress and head covering, are as typical as the flashing senoritas of the South. However, these southern beauties do not wear the mantilla and full satin skirts every day as painters and writers would lead us to believe. The rich shawls, lace head scarfs of black or white, the fans, combs, and Camellias appear most often at the fiesta and feria.

A very familiar, but picturesque, figure is the night watchman or *sereno* who wears a heavy striped blanket about throat and shoulders and around his waist a huge leather belt with rows of pockets filled with keys. The young dandies of the north appear with hair banged and brushed forward over the ears in imitation of the bull fighters. Their hats are flat brimmed, their short coats are of black velvet, and their narrow hips are bound with red sashes.

The Andalusian *muchacha* appears in a flounced skirt over long petticoats. The long fringe of her red and white or blue-green shawl drops from shoulder and dress. She carries a flower in her mouth; in her hair she wears a huge comb. Her partner is a slim youth, tight-trousered, short-jacketed, and belted high with a bright sash.

THE woman of Valencia gives us another typically Spanish dress. Her bodice is tight-fitting with a semi-tight sleeve, either long or to the elbow, edged with a band of wide lace. Over this she wears a beautiful shawl draped around shoulders and brought across front of the body and fastened at the waist on the left side. It is held in place at the neck with a cameo or gold brooch. The skirt is long and consists of many flaring gores. It may be made of plain colored plaids or flowered materials. Over this she wears a beautiful white apron of all-over embroidered lawn or some sheer material edged with lace. Her low shoes are very fancy with bows of ribbons or pompoms. She is loaded with necklaces, chains of beads, heavy filigreed earrings, brooches, beautiful hairpins and combs, and usually carries a small basket with flowers. Her coiffure is simple. The hair is parted in the middle and a coil is arranged over each ear and pierced with two long hairpins which cross. The back hair is plaited and coiled and held in place by long pins ornamented at the ends with knobs of gold or silver, sometimes jewelled; and crowning all is the high comb so characteristic of the Spanish costume.

Going into the Pyrennean districts we find the peasant woman in a close-fitting bodice with large sleeves finished in a very deep cuff. The lower part of the bodice forms a basque-like effect in velvet and ends in a pointed front. The neckline is low and round and finished with a narrow round velvet collar. The basque, collar and cuffs are all edged with a braid of very rich design. Under her bodice she wears a white waist or chemisette; the edges of the sleeves show below the velvet cuffs and the upper part of the waist fills in the front part of the neck of the bodice. This under waist is very elaborately embroidered and pinned at the neck with a brooch. The skirt is full and about five inches from the ground and is banded in alternate rows with velvet and braid. An apron of velvet, embroidered, braided, and fringed, light hose and low cut tie shoes finish her costume.

Her hair is arranged simply, parted in the middle and combed straight back. Over her head a kerchief of white silk, cotton or wool, with a colored border, is worn. Her jewelry consists of beads and earrings.

The man wears a hat of dark or black felt with a high crown and narrow brim. His close-fitting coat extends just to the waist-line. Under this a velvet vest is worn. His trousers are long and somewhat loose. His shirt is white and soft and a bright sash is tied around

SPAIN
Color Scheme

Woman—Red dress lined with yellow, white lace on petticoats. Red shoes. Amber comb with red roses.

Man—Black costume with yellow sash and tie and red cloak. Under blouse is white.

ITALY
Color Scheme

Woman—Pink skirt trimmed with green, yellow and black bands—white embroidered apron, green girdle with white blouse. White cap and stockings. Black shoes.

Man—Black shoes, pants and cap, yellow vest, red sash and tie. White shirt.

his waist. Over his left shoulder he carries a shawl of many gay colors, edged with a ball fringe of wool. Plain shoes complete this very picturesque costume.

PASSING into the province of Segovia, one finds a very odd head-dress worn by the women. It is a close-fitting cap which has two flaps, one in the front and one in the back. These flaps are bent back and joined together at the top, giving a high peaked appearance to the hat. Both the front and back flaps are richly embroidered in a conventional scroll design and are finished with a pompom at the upper edge. On either side of the cap, a row of buttons rim the side seams. In the ears are pendant ornaments.

The dress is made of dark material trimmed in bands of contrasting color. The bodice is a fitted one with rather tight sleeves which are finished at the bottom with two bands of contrasting color and a row of buttons up the seam. The skirt is full and trimmed at regular distances with four bands of the same material as the sleeves. Many chains of beads and a gold necklace with a heavy pendant are worn. Soft moccasin-like shoes cover the feet.

We find the peasant man costumed as follows: A broad brimmed hat turned up at right angles all around is worn at a decided slant over the right ear and held in place with a strap under the chin. A ribbon falls from the under side of the brim down over the right shoulder. A soft white shirt is worn. Over this a vest of bright colored velvet, embroidered all over, is worn open to show the shirt. In addition we find a very close-fitting coat or jacket worn open and embroidered around the neck and edges. The sleeves are very tight and finished with a deep cuff of the same embroidery and a row of buttons. The trousers are short, tight-fitting and opened up the side to show an undergarment of light colored material. They are embroidered across the front and around the edges of the side opening with a conventional scroll pattern and are tied just below the knee with a tasselled cord. The legs are wrapped in close-fitting leggings; and soft leather shoes very similar to our Indian moccasins are worn. Around the waist is a leather belt three or four inches wide with the name of the wearer in metal letters. The mountaineer's costume is breeches; a short jacket or coat; and a wide brimmed felt hat over the head. A staff frequently completes this austere but natty costume.

Portugal

IN Portugal we find no national characteristics in dress among the upper classes, such as the mantilla in Spain, but among the peasants the similarity of costumes in different districts is quite noticeable. The women generally go barefooted with their heavy skirts drawn up through a girdle below the hips for better convenience in walking. A bright colored kerchief is worn over the shoulders and another is twisted around the head under a soft round black hat which is very unbecoming but convenient for the carrying of heavily laden market baskets. A white blouse with short loose sleeves and a full skirt of colored plaid or striped material are worn. A small apron of light colored material with a flowered or embroidered design and a fringed shawl of variegated colors, thrown over the left shoulder, completes her costume. In the province of Affife the overskirt and shawl head-dress belong to the original picturesque costume of the northern part of Portugal. In Minho we find a very beautiful costume unsurpassed in coloring and weaving and in the splendor of the golden ornaments which are a part of the costume of every Portugese peasant woman and which are handed down from generation to generation.

Italy

THE Italian peasant costumes are fast disappearing, as the people are adopting the conventional dress of the Europeans, but in some of the mountainous regions and villages far off the main line of travel, one is still fortunate enough to find a few costumes still in existence. The boys and men all wear soft round black hats while the women and girls wear a small shawl folded into a square.

In Lombardy up in the northern part of Italy, the traveller is attracted by the singularly picturesque costume of the *Brianza.* It is generally worn in its full richness by nurses in the wealthier families, and so is seen almost as often in the cities as in the Brianza itself, whence these nurses come, and where it is now mostly worn at holiday affairs. The head-dress is of silver needles so placed in the hair as to fashion an aureole; the ears have massive rings in them and over the shoulders a kerchief, decorated with a large flowered pattern in bright colors, is worn. A very full skirt and black bodice with short sleeves make the dress. The peasant women add to this colorful costume little wooden slippers (held on by a piece of embroidered cloth which crosses the foot) that clink and clatter over the cobbled country lanes.

Some of the costumes of Abruzzi are particularly

attractive. The girl of Pacendro wears a great snowy floating veil of white linen edged with lace, folded over the brow and hanging loose behind; also white sleeves and a brilliant kerchief tucked into her dark blue, pink-lined bodice which is loosely laced with an orange ribbon. Under the bodice is worn a white chemisette cut very low at the throat and showing a gold necklace. Her skirt is russet and her apron blue.

THE girl from Introdacqua wears an immense *tovaglia* (head-dress) of white rising in a point above the forehead; a crimson bodice with red sleeves tied to it with ribbon bows; a striped skirt; a white lace chemisette; and a colored necklace. The small boy who accompanies her is dressed in a long blue coat and trousers, a red vest, and a black hat.

But the costume of Genzano is the most striking of all in the following details: A scarlet cloth called the fascia trella is worn over her white tovaglia; the velvet bodice is blue and has blue sleeves which are tied at the shoulders with flame colored ribbons; the other parts of her dress are similar to the ones already described.

In Scanno the head-dress of the women is a curious black turban covering the whole head, which allows the hair to show behind the ears. The turban is tightly embroidered with bright colored wools—red, green and yellow. Each color probably has its significance; perhaps one for maids, one for matrons, and one for widows. The skirt of heavy green cloth is short and pleated full around the waist. The close-fitting bodice of dark blue has leg-of-mutton sleeves and is fastened with silver buttons. The high linen chemisette showing at the neck is edged with very handsome lace.

GOING down into southern Italy we find the dancers of the Neapolitan Tarantella dressed in very brilliantly colored costumes. The man has on a black velvet cap, white shirt with red tie, bright yellow vest, short black velvet breeches, wide red sash tied around waist, white hose and black shoes. Over his left shoulder a Roman striped scarf is draped. His partner in the dance has a white linen kerchief folded in a square and draped on the head. Her blouse is white and finished with a deep lace collar. She wears a bright green bodice trimmed in yellow and black braid and a very full red skirt with bands of green, yellow and black around the bottom. A white lace apron, white hose, black pumps, Roman striped scarf, earrings, rings and necklaces complete her costume.

The folk dress of Calabria is very colorful. The

(Continued on page 46)

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Lagartera Lady in Gala Dress (colors) .....*N. G. Vol. 46 P 163
Peasants of Mogarraz (colors).....*N. G. Vol. 45 P 164
Peasants of Alberca (colors) .....*N. G. Vol. 46 P 165
Women of Seville (colors) .....*N. G. Vol. 46 P 166
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Debutantes of Lagartera (colors).....*N. G. Vol. 46 P 170
Peasants of Charros (colors) .....*N. G. Vol. 46 P 170
Peasants of Toledo (colors) .....*N. G. Vol. 46 P 171
Shepherds of Castille (colors) .....*N. G. Vol. 46 P 172
Andalusian Dancers of Seville (colors) .....*N. G. Vol. 46 P 172
Peasants of Seville and Mogarraz (colors).....*N. G. Vol. 46 P 174
Peasants of Mogarraz fiesta dress .....*N. G. Vol. 46 P 175
Bull fight of Salamanza .....*N. G. Vol. 46 P 176
Gypsy of Granada .....*N. G. Vol. 46 P 176
Women of Seville (colors) .....*N. G. Vol. 46 P 177
Peasant women .....*N. G. Vol. 46 P 178
Head-dresses .....*N. G. Vol. 46 P 189
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Italy

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Sardinian Men .....*N. G. Vol. 30 P 99
Sardinian Peasants of Aritzo .....*N. G. Vol. 30 P 104
Sardinian Peasants of Nurro .....*N. G. Vol. 30 P 107
Sardinian Peasants of Iglesias .....*N. G. Vol. 30 P 109
Peasant girl (colors) .....*N. G. Vol. 28 P 444
Peasant boys (colors) .....*N. G. Vol. 28 P 448
Roman flower girl (color) .....*N. G. Vol. 28 P 449
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Girl of Iglesias .....*N. G. Vol. 43 P 34
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Woman of Desulo and baby .....*N. G. Vol. 43 P 38
Peasant Men .....*N. G. Vol. 43 P 37
Peasant Men of Iglesias .....*N. G. Vol. 43 P 39
Peasant Men of Burgos .....*N. G. Vol. 43 P 41
Men of Iglesias .....*N. G. Vol. 43 P 43
Girl of Aritzo .....*N. G. Vol. 43 P 42
Woman of Osilo .....*N. G. Vol. 43 P 44
Old Man of Sardinia .....*N. G. Vol. 43 P 45
Peasants of Campidone .....*N. G. Vol. 43 P 46
Women and Children of Desulo .....*N. G. Vol. 43 P 63
Girls of Desulo .....*N. G. Vol. 43 P 67
Girls of Olieva .....*N. G. Vol. 43 P 66
Gala costume of Osilo .....*N. G. Vol. 43 P 70
Rear View of Costume of Osilo .....*N. G. Vol. 43 P 71
Shepherd of Calabria .....*N. G. Vol. 43 P 181
Peasant Women in "Women of All Nations" ..*N. G. Vol. 2 P 711
Girls in National Costume (Ibid) .....*N. G. Vol. 2 P 715
Corsican Peasants .....*N. G. Vol. 44 P 252-53
Peasant Children of Strona Valley .....*N. G. Vol. 45 P 378
Sicilian Peasant Boys .....*N. G. Vol. 46 P 307
Sicilian Peasant Children .....*N. G. Col. 46 P 344
Sicilian Peasant Man .....*N. G. Vol. 46 P 347
Sicilian Peasant Women .....*N. G. Vol. 46 P 350
Peasant of Aosta (colors) .....*N. G. Vol. 46 P 439
Peasant of Northern Italy (colors).....*N. G. Vol. 46 P 440
Peasant woman of Leiria .....*N. G. Vol. 42 P 526
Shepherds and Shepherdesses .....*N. G. Vol. 42 P 528
Women of Minho .....*N. G. Vol. 42 P 528
Madeiran Girls in gala dress .....*N. G. Vol. 34 P 761
Madeiran Children .....*N. G. Vol. 34 P 762
Women of Oporto .....*N. G. Vol. 21 P 888

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THE CONTENTS

Part I

Legal Provisions
Objectives
Organization
Classification of Activities
Play Areas, Equipment and Supplies
Suggestions to Teachers

Part II (Graded Program)

FIRST GRADE
Story Plays
Rhythmical Activities
Hunting Games
Mimetics

SECOND GRADE
Hunting Games
Rhythmical Activities
Story Plays
Relay Races
Mimetics

THIRD GRADE
Hunting Games
Rhythmical Activities
Relay Races
Stunts
Mimetics
Athletic Games

FOURTH GRADE
Athletic Games
Relay Races
Hunting Games
Rhythmical Activities
Stunts
Mimetics

FIFTH GRADE
Athletic Games
Individual Athletic Events
Relay Races
Stunts
Rhythmical Activities
Hunting Games
Mimetics

SIXTH GRADE
Athletic Games
Individual Athletic Events
Relay Races
Stunts
Rhythmical Activities
Hunting Games
Mimetics

SEVENTH GRADE
Athletic Games
Individual Athletic Events
Rhythmical Activities
Stunts
Relay Races
Hunting Games
Mimetics

EIGHTH GRADE
Athletic Games
Individual Athletic Events
Mimetics
Rhythmical Activities
Stunts
Relay Races
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INDEX

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News from the Eastern District Society

Assembled by Dr. Clifford L. Brownell, *Chairman*

Maryland

THE Division of Health and Physical Education in Baltimore has issued the following directions for apportioning the time during a regulation gymnasium period:

The usual period in secondary schools is 40 or 45 minutes; in elementary schools 30 minutes. In order to lose no time in taking attendance, squad lists of 8 or 10 names are arranged. These cards are placed on the gymnasium wall at intervals of six feet with pencils attached. Each pupil signs his name as previously assigned.

The floor is diagrammed and a sketch posted assigning different spaces for selected activities. These may either be competitive events to be used in some future meet or they may be achievement events, selected from the Baltimore list, which have been standardized for five groups according to age, weight and height.

An incentive to early appearance on the gymnasium floor is added by allowing the first arrivals to select their own choice of squad event.

When a squad of eight is completed, the ninth and subsequent pupils join their next choice squad.

On signal at half time the director secures attention of entire group and if class is large (40 or more) takes charge of all for rhythmics, marching tactics or calisthenics, taking about eight minutes.

A game or relay races should take the final fifteen minutes of the period for those who do not elect to take the showers.

STATE-WIDE

Girls' Field Ball—	1929	1930
Number of counties playing	21	22
Number of teams	104	105
Number of players	1820	1838
Boys' Soccer—		
Number of counties playing—23 (100%)		
Number of teams	128	133

Six counties will hold girls Indoor Carnivals this winter.

The 1930 Girls' National volley ball report for Maryland—

Volley Ball is played as a class activity in all public schools—

Private Schools	5	Total—
Normal Schools	3	174 schools
Colleges	4	538 teams
High Schools	151	8561 players
Night Recreation Centers	33	

Baltimore has organized a Women's Field Hockey Association. The officers include representatives from the five local hockey clubs.

A local Women's Field Hockey Umpire Association has been organized.

Baltimore recently organized a Women's Basketball Referees' Association.

The Maryland Physical Education Association started the year with a dinner following the State Teachers Convention. Dr. L. Raymond Burnett heads the organization as its President for the school year.

New Jersey

In September, the first county supervisor of health and physical education began work. The correct legal title is "Helping Teacher." It is a decided forward step, one, it is hoped, that will soon be taken by al' counties. The bulk or attention will be devoted to rural schools. The supervisor is Miss Agnes Gardell, formerly of the Elizabeth Public Schools.

The state department is revising its course of study in physical education. According to the plan recently announced, all physical education supervisors and teachers in the state are to be invited to contribute. In addition, committees are to be formed, each with a definite assignment. The material obtained through these channels will be edited and prepared for publication.

Point systems and intramural organizations seem to be replacing interschool athletics for girls. It is a particularly hopeful sign that the transition is taking place with increasing ease each year that passes.

Trenton is stirring 'round. The Eastern District Convention is due there April 22 to 25 inclusive. Jot it down now. Mr. Walter Short, the Trenton director, is chairman of the general committee. Already, plans are taking form. Look for further announcements.

Dr. A. G. Ireland.

Connecticut

On October 24, at the State Teachers' Convention in Hartford, two hundred physical education teachers and school nurses of Connecticut met at the first combined section meeting attempted in this state. An outstanding feature of this meeting was the program presented at the luncheon where four prominent speakers brought to the group their points of view with relation to physical and health education as it functions in the public schools. The speakers were, Major Stanley, a school superintendent of Hartford, Dr. Brownell of Teachers College, Columbia University, Dr. Peter, internationally known in the field of public health, and Mrs. Colton, director of the bureau of character education research of the Connecticut State Board of Education.

The Connecticut State Board of Education voted on November 5 to include as a regular division the Bureau of Character Education conducted by Mrs. Ruth White Colton. A five year test will be accorded the project which until now has been financed by the Hartley Foundation.

An attempt will be made to bring to the attention of school superintendents, supervisors of rural education and high school principals all visual education materials that concern the organization and teaching of physical education and health. Dr. Charles J. Prohaska, director of physical and health education of the State Board of Education will present materials available and conduct discussion as to their use and worth.

Dr. Franklin E. Pierce, who for the last six years has been senior supervisor of secondary education of the state department of education, has been appointed director of teacher preparation in Connecticut. At one time Dr. Pierce was director of health and physical education in the Montclair, New Jersey, public schools.

Dr. C. J. Prohaska.

Rhode Island

During the Spring of 1930 audiometer tests for hearing were given to all pupils in the Providence schools from the third grade up through the junior high schools. The tests were made by using a 4A audiometer, which has a graduated phonograph record of the human voice. Defective hearing was recorded or scored when the hearing loss was 9% or more (sensation units) in either ear. Pupils who failed to make a satisfactory score in the first test were given a second test for the purpose of eliminating certain errors that may occur in any test. The retest was given by use of another phone.

The total number of pupils tested was 22,303. Of this number 1793 failed to qualify and were given a retest. The result of the retest was that 991, or 4.5%, were found to be defective. These were divided as follows: right ear 428, left ear 307, both ears 256. It is interesting to note that the number of boys is slightly greater:—boys 511, girls 480.

Neva L. Langworthy.

Massachusetts

Superintendent L. W. Grant of Norwood writes that physical education has been added as an elective in the evening

(Concluded on page 56)

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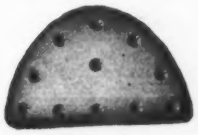

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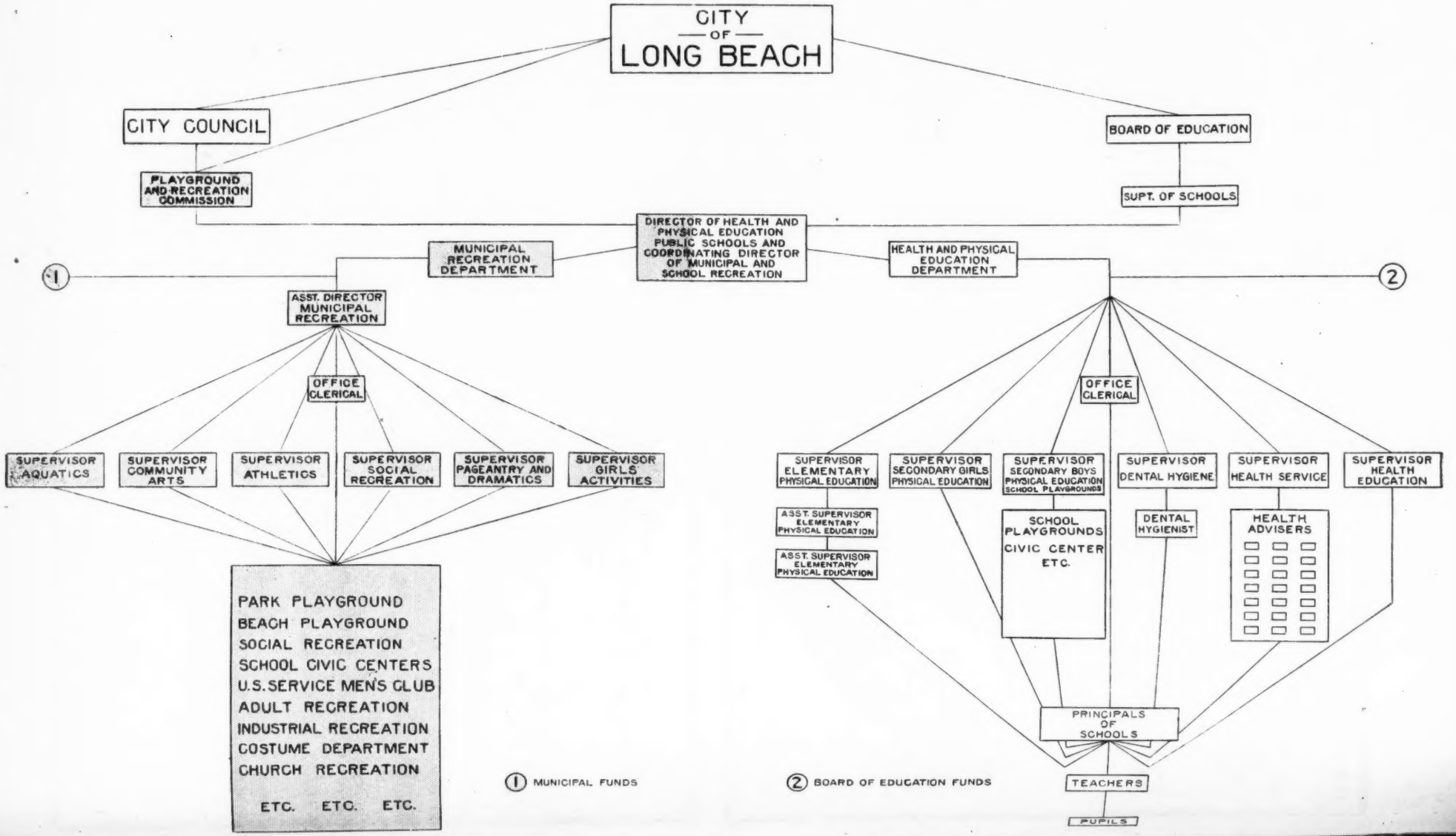
Submitted by Charles H. Hunt, Director of Health and Physical Education, Long Beach City Schools, California



Mass Teaching in Basket Ball Skills

By Ralph J. Schnitman, *Instructor of Physical Education, New Haven, Connecticut*

THE following drill was presented by a group of elementary schools at the Eastern States Convention in New Haven, Connecticut. One hundred boys participated in it. It not only proved interesting as a demonstration, but also received favorable comment from the standpoint that student leaders conducted the entire demonstration. Apart from its demonstration value, this drill gives excellent grounding in the fundamental skills of basket ball.

All skill activities are commanded by a boy who acts in capacity of coach. Squad leaders (assistant coaches) are in charge of six (6) boys each. There are fourteen squads and fourteen (14) basket balls, although any number of squads may be used to good advantage, depending on the size of floor space.

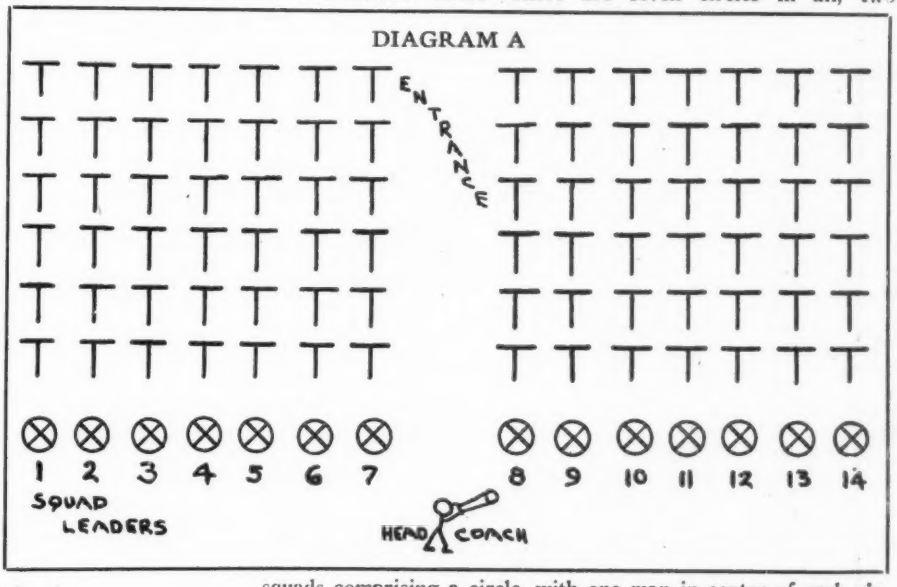
METHOD OF ENTRY

Head coach enters and runs to middle of floor. (See Diagram A.) He blows whistle for basket ball squad to enter. Squad leaders enter dribbling basket balls, with their respective squads following directly after them. (See Diagram A.)

PROGRAM OF ACTIVITIES

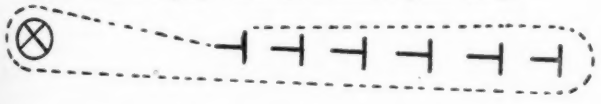
Games in which basketball skills may be developed. Head coach blows whistle to start various basket ball relays. Squads compete against each other in pairs, e.g., Squad 1 competes against Squad 2; Squad 3 against Squad 4, etc.

DIAGRAM A



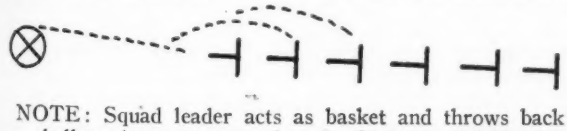
Types of Games Used in A

Squads 1 and 2 play "Dribble around a point relay."



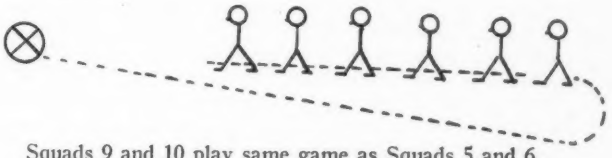
Squads 3 and 4 play "Dribble in and out relay."

Squads 5 and 6 play "Dribble to basket and shoot relay."



NOTE: Squad leader acts as basket and throws back the ball to the next man, after the first man dribbles up and makes a push shot about ten feet in the air at an imaginary basket, and having the ball drop and land in the squad leader's hands.

Squads 7 and 8 play "Under leg or tunnel relay with basket shooting."



Squads 9 and 10 play same game as Squads 5 and 6.
Squads 11 and 12 play same game as Squads 4 and 3.
Squads 13 and 14 play same game as Squads 1 and 2.

Head Coach blows whistle to change game. In this case however, each squad plays the same game.

Formation: Circle—There are seven circles in all, two squads comprising a circle, with one man in center of each circle. Two balls for each circle. One ball is given to a boy on the circumference of the circle, and the other ball to the center man.

Object of Game—At a given signal the man on the circumference of the circle passes his ball to the center man, while the center man attempts to pass his ball to the next standing man on the circumference and so on till the center man is made to miss. Person who makes center man miss or fumble the ball, exchanges places with him.

This is a good game for developing quick and accurate handling and passing of the ball.

Definite Coaching of Skills

Head coach blows whistle and commands the boys to return to their original straight lines (with exception however, that the odd rows, i.e., 1, 3, 5, 7, etc., face in the opposite direction. (See Diagram B).

Each squad leader has a ball in his possession at the time.

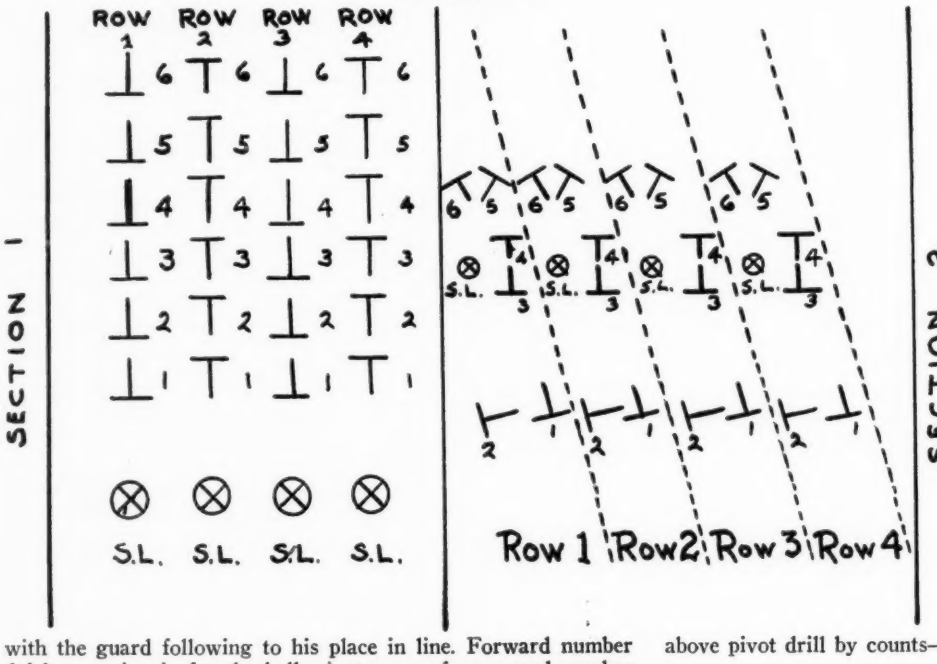
On the next whistle blown, the coach commands "To your formation—run." Immediately boys numbers 1 and 6 in each row run to interspaces between their respective rows to become "forwards." Boys number 2 and 5 run to interspaces between rows and become "guards," number 2 boy guarding number 1, and number 5 boy guarding number 6 boy. Boys numbers 3 and 4 face each other and become opposing centers. Boys run-

ning to interspaces always go into space to the right of their original line. Boys numbers 1, 4, and 5 become the forward, center, and guard on one team, and boys 6, 3, and 2 become forward, center, and guard on other team. Squad leaders run to position between opposing centers, ready to toss ball up at coach's whistle.

At whistle from head coach, the ball is tossed up at each center by the squad leaders, and is then tapped by the various centers to their men. In the odd rows, i.e., rows 1, 3, 5, 7, 9, 11, and 13, ball is tapped by man number 3 to forward number 6 of his row. Forward number 6 immediately catches the ball, then pivots away from his guard (i.e. number 5 man) and returns to the original straight line formation with his guard following him to position. The forward numbers 1 in the odd rows, fake coming in for the ball and then pivot away from guard number 2, going to their places in the straight line with their guards following. The centers face in the line of direction and as they are already in line, they merely open their spaces.

In the even rows, i.e., rows 2, 4, 6, 8, etc., the ball is tapped by number 4 man to forward number 1. (This will put the ball in a position just opposite to that of the odd rows.) Forward number 1 comes in for the ball, pivots away from guard number 2, and dribbles ball back to original straight line formation, with the guard following to his place in line. Forward number 6 fakes coming in for the ball, pivots away from guard number 5 man and both return to their original positions in the straight line formation. The centers face and return to their places.

DIAGRAM B



The ball will now be in the hands of all number 6's in the odd rows, and all number 1's in the even rows. The odd rows face in the opposite direction to that of the even rows. (See Diagram B, Section 1.) From this formation we do the next activity which is the Push Pass.

Passing and Catching Push Pass

In the odd rows 1, 3, 5, 7, etc., the number 6 man faces number 5 man and makes a push pass to him. Number 5 man passes ball back to number 6 man and turns and faces number 4 man (as number 5 turns he bends low and steps forward as though he was passing a ball). Number 6 man passes ball over number 5's head to number 4 man. Number 4 man passes ball to number 5 man, as number 5 man is now facing him, then number 4 man turns and faces number 3. Number 5 man passes to number 3 over number 4's head. Number 3 passes to number 4 and turns to face number 2. Number 4 passes to number 2 over number 3's head. Number 2 passes to number 3 and turns to face number 1. Number 3 passes over number 2's head to number 1.

The ball is then worked back to number 6 in the reverse manner. All men go through the motions of passing and catching, keeping in time with the man who is actually passing the ball.

In the even rows, 2, 4, 6, 8, etc., the ball is started at number 1 man and then worked down to number 6 and back again in the same manner.

This drill is effective in making a man pass the ball at a chest high level (because the ball must clear the man in front, who acts as an obstacle between thrower and catcher). Squad leaders pass up and down lines making corrections as to form.

Cross Chest Pass

The head coach blows whistle and commands cross chest passing to begin.

Formation—Row 1 faces row 2; row 3 faces row 4, etc. Men numbers 1, 2, 3, in the odd rows team up with men numbers 1, 2, 3 in the even rows to form a squad, having one ball for their use and one squad leader in charge. Men numbers 4, 5, 6, in odd rows team up with numbers 4, 5, 6, of even rows, and have one ball and one squad leader in charge also. This scheme of teaming up is used through the drill whenever squads are told to face each other. The head coach commands the passing and gives suggestions and corrections from his position. The squad leaders carry out the coaches orders, by correcting the faults of the boys as they occur.

Pivots, Pivot Fundamentals
(Mass Instruction)

Head coach blows a whistle and commands the entire group to face him. Coach also tells the boys who are in possession of a ball at the time to work with one.

Coach commands—Count 1, "Jump spread your feet apart, and raise your hands in front of you, as though you were catching a ball"—1; Count 2, "Keeping the left foot in place, pivot back with the right"—2; Count 3, "Return"—3; Count 4, "Jump to position"—4. During this procedure the squad leaders pass around making corrections.

Coach next commands—The above pivot drill by counts—four (4) times in series.

Pivot with Opposition (without ball)

Head coach blows a whistle and tells the odd rows to face the even rows, e.g., row 1 faces row 2; row 3 faces row 4; etc. Coach also asks for balls to be given to men number 1 and 6 of each odd row.

Coach commands—"Odd rows make believe you are making a push pass to your partner in the even rows; the even rows jump, spread your feet apart and raise your hands as though you were catching a ball thrown by your partner in the odd rows." This combined movement is done on count 1. "On count two, the odd rows run in to guard the men opposite them in the even rows; while the men in the even rows pivot away from their guards, i.e., from the odd row." "On count three, all return to their original places." Men numbers 1 and 6 actually throw the ball to their partners in the even rows, as they have one to use. This same procedure of throwing, charging, and returning to original places is repeated again with the exception that the even rows make believe that they throw first. This same procedure is again repeated with the odd rows throwing first. Once more this same procedure is used with the even rows throwing first.

Pivot with Opposition (with basket ball)

Formation—Odd rows facing even rows. Coach commands—"Weaving go!"—(This movement resembles weaving as one may see from the following directions—hence this peculiar command.) The basketball is given to number 1 and 4 men in the odd rows. 1. Number 1 man throws ball to number 1 man of the even row and runs in to guard him, while the number 1 man of the even row pivots away from him. 2. Number 1 man in the even row returns and throws the ball to number 2 man of the odd row and runs in to block him. Number 2 man of the odd row, meanwhile pivoting away from him. 3. Number 2 of odd row passes and runs to block number 2 of even row, etc. 4. Number 2 of even row passes and runs to block number 3 of odd, etc. 5. Number 3 of odd passes and runs to guard number 3 of even numbers, etc. 6. The ball is then worked back to number 1 of the odd row by the reverse manner. (See Diagram C.)

At the same time that the ball in the possession of man number 1 of odd row is worked up and back, the ball in the possession of man number 4 is worked up to number 6 and back again as in 1, 2, 3, 4, 5, of above. (See Diagram C.)

Throughout the passing and pivoting the squad leaders give help to their squads.

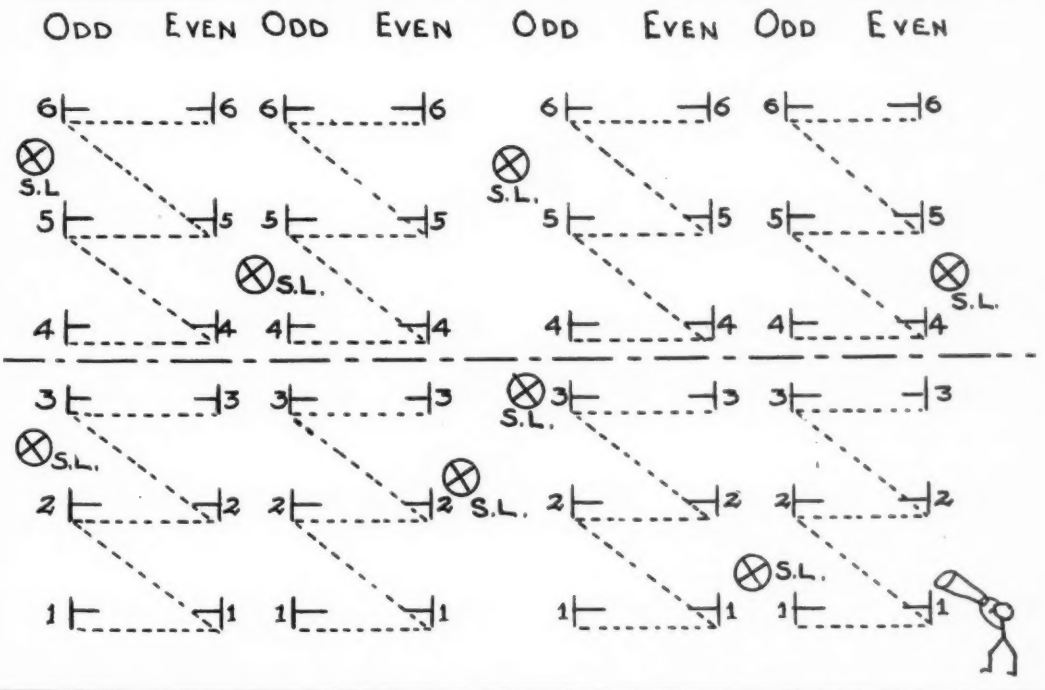
—1. "Even rows take two dribbles forward." (Number 1 man and 4 man actually dribble a ball, others make believe.); 2. "Set and catch ball"; 3. "Pivot"; 4. "Cut," as the even rows pivot the odd rows cut across and receive the ball (i.e., number 1 and 4 men of odd rows actually receive the ball, others make believe they are receiving a ball and dribble the imaginary ball back to their original places). (Note: The odd rows don't cut until the coach commands them to); 5. "Cut" as soon as the even rows are about to pivot.

The man number 1 and 4 of the odd rows have the balls now and the coach commands "the odd rows to go down and the even rows to cut." The balls are then given to men numbers 2 and 5 of the even rows. The even rows go down and the odd rows cut. The odd rows go down and the even rows cut. The balls are given to numbers 3 and 6 of even rows. The even rows go down and the odd rows cut. The odd rows go down and the even cut. Squad leaders offer suggestions throughout.

Criss-Cross Passing

Coach commands "Face for Criss-Cross Passing." Formation—Rows 1, 2, and 3 work together; rows 4, 5, and 6 work together; rows 7 and 8 work together; rows 9, 10, and 11 work together; rows 12, 13, and 14 work together. (See Diagram D for the facing of the men.)

DIAGRAM C. Showing Eight Rows in Action—Squad Leaders Spread About



Dribble, Pivot and Pass
(Mass formation, without use of ball)

Formation—All boys face the front (i.e., the head coach). Boys having a ball in their possession, actually use it. Other boys simply go through mimetic motions. Coach commands—"Dribble, dribble, set, pivot, return, pass—face left!" The above command is self explanatory. The boys go through the motions of dribbling, stopping, pivoting, and passing in time with the command of the coach. Each command takes one count, and every boy works in unison. Of course the boys having a ball, use it.

The above drill is repeated three more times in series with a facing to the left each time, so that the entire group ends up facing in its original direction. Squad leaders give corrections.

Dribbling and Cutting for the Ball

Formation—Boys face front; odd rows are teamed up with even rows however. Coach commands—"Balls to be given to number 1 man and 4 man of even rows." Coach next commands

Balls are given to number 1, 3, and 5 men of rows 2, 5, 10, and 12. Also one ball is given to number 2 man of row 7 and number 5 man of row 8. Coach commands—"Criss-cross passing begin!" Those boys having a ball use it in their groups of three. Those not having a ball go through the motion of catching, passing, and cutting for the ball, anyway.

NOTE: To those people not familiar with the term criss-cross passing, let me say that it is simply a means of naming the action of advancing a ball, behind opposition, with using three men. The center man usually starts the pass. As soon as he passes the ball to one of his team mates who cuts in front of him, he cuts in back. The man who now has the ball passes to number 3 man who cuts in front to receive pass. The passer then cuts to the rear of the man he passes to. In other words when you want to receive a pass you cut in front, after you pass to a man you cut in back. Thus the ball is advanced forward and a figure resembling a figure eight is made.

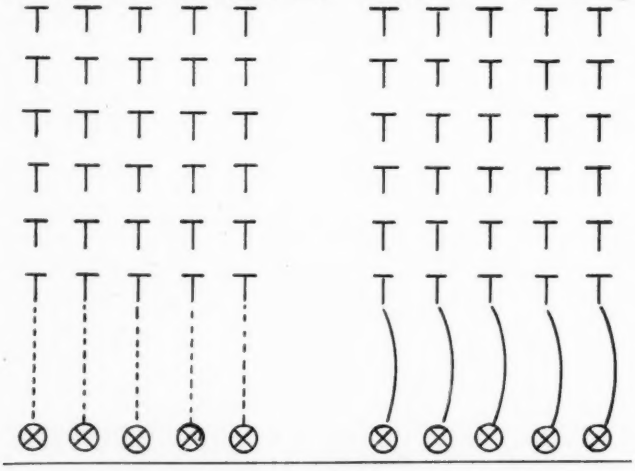
In this drill, however, no advance forward is made; each boy makes a figure eight and returns to his place, without advancing. All boys move at once, describing a "hay" in folk dancing continuously. Balls are used by those boys who have them. This will make one half of the class using one ball each for their group of three. Coach next commands balls to be given to groups not having had them. Everyone starts criss-cross passing again.

Shooting, Dribble and Push Shot

Formation—(See Diagram E). Boys face front and close their lines to the rear. Squad leaders stand in front of gymnasium.

DIAGRAM E

Section 1—Dribble and Push Shot. Section 2—Foul Shooting.



Squad leaders coach boys in dribbling and shooting as each boy in turn dribbles up and makes a push shot into the air, about level of an actual basket. The squad leader catches the ball and throws it back to the next boy, who dribbles up and attempts a shot.

Foul Shooting

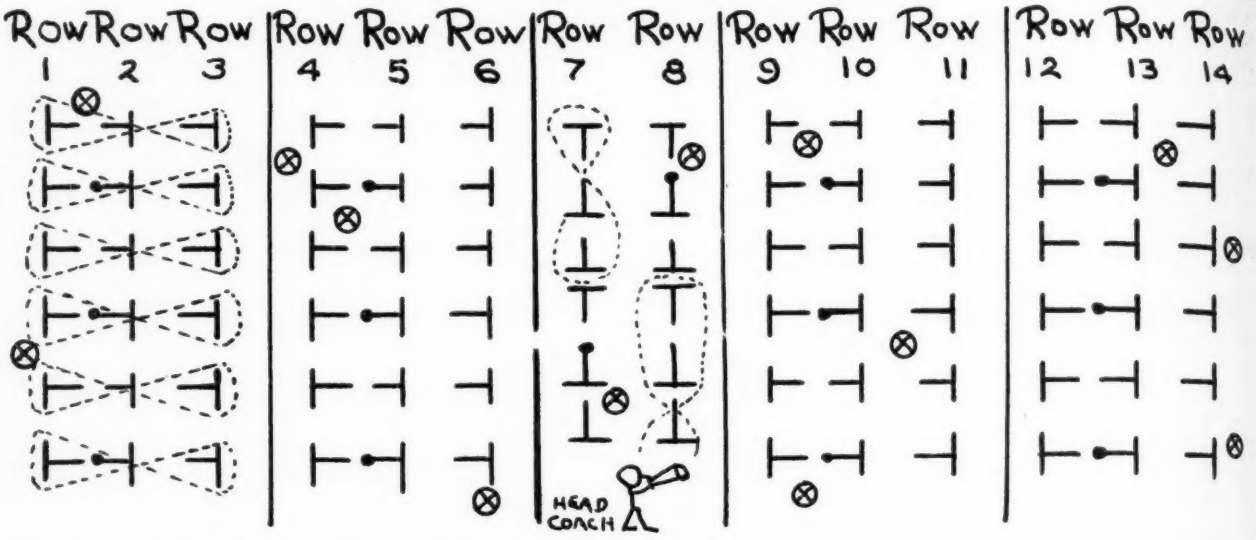
Formation—(See Diagram E, Section 2.) Boys are in same formation as for dribble and push shot, except that squad leaders are closer to their squads. Coach commands—"Foul Shooting begin!" Squad leaders coach the boys as each in turn throws a foul shot into an imaginary basket. Squad leaders catch each ball as it is thrown, and then pass it back to the next standing boy.

Squad Leadership

Coach commands—"Section work, begin!" The odd rows team up with the even rows to form sections of twelve boys and

DIAGRAM D

Black circles indicate position of ball.
Circles with X in center indicate squad leaders spread out at random.



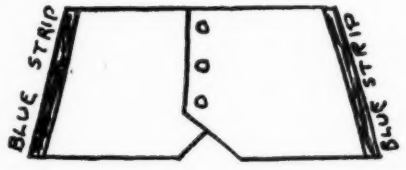
two leaders each. (See Diagram F.)

Section 1 does all forms of passing and catching, including the push pass, the cross chest, the bounce pass, the hook pass, and the underhand pass.. Section 2 does criss-cross passing advancing the ball forward. Section 3 does dribbling and pivoting to pass to trailer with a man guarding the dribbler; the trailer cuts across in front of the dribbler as the dribbler pivots. Section 4 does simple "scissors" tap off play at center. If ball is tapped to right forward, then the left cuts to the right side to receive a pass from right forward, as the right forward pivots. Section 5 does "pivot man play," i.e., the two forwards cut in back of center, who pivots and throws ball to one of the forwards, leading him on to basket for a shot. Section 6 does plain dribbling forward around their squad leader, for practice in handling the ball while dribbling. Section 7 does passing while running in a circle. (For foregoing formations see Diagram F.)

Basket Ball Game

Coach blows whistle and tells the boys to prepare for a basket ball game. Immediately rows 1, 2, 3, 4, 5, 6, and 7 run to one side of the gymnasium and sit down, thus forming one of the sidelines for the basketball court. (See Diagram G.)

These boys each wear blue stripes sewed or pinned onto the sides of their running trunks, to resemble basket ball pants. (See sketch.) These boys are represented by a team of players wearing blue jerseys.



Rows 8, 9, 10, 11, 12, 13, and 14 sit on the opposite side of gym, forming the other sideline to the basket ball court. (See Diagram G.) These boys have a red stripe pinned or sewed to each side of their running pants, and are represented by a team of five players wearing white jerseys.

Baskets are common, ordinary peach baskets with bottoms knocked out and held by a *conical pyramid* composed of five boys—three boys on the bottom grasping shoulders to form a

(Concluded on page 54)

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Introductory Exercises to Tumbling

By J. H. McCulloch

Professor of Physical Education, Michigan State Normal College, Ypsilanti

IN the training of any activity, the thing of fundamental importance is the acquiring of proper rhythm, timing, co-ordination, or whatever name may be applied to this fundamental principle of training as applied to activities.

The importance of emphasizing this aspect may be duly impressed upon us if we stop a moment to consider that practically all the things which happen in the universe about us, both animate and inanimate, seem to follow definite rhythmical laws. The movements of the planets, the seasonal changes, the rise and fall of tides, and the growth of plants are but a few of the examples of rhythmical actions in the world about us.

The physiological processes which occur within our bodies, such as respiration, heart beat, and the discharges of the nerve cells apparently follow definite rhythmical laws. With this evident universality of rhythm in nature, any suggestion which may prove helpful in teaching rhythms may be quite useful in our activities program.

The following exercises which we use as introductory to tumbling have proven to be quite valuable in this respect. They are best performed to music of a two-four rhythm, (popular melodies being most interesting.) If desired the exercises may all be executed on the floor without mats, a procedure which accommodates large numbers.

The squads should consist of not more than ten members and after a few movements have been executed, each member of the squad should be able to suggest and demonstrate a variation which differs from all which have preceded.

The members of the squad should follow about three feet behind one another, which reduces standing around and waiting for a turn. In this way much activity may be secured.

Two 5 ft. x 10 ft. mats placed end to end make an ideal surface on which to work.

The organization offers an opportunity for leadership and creative thinking to each member of the group.

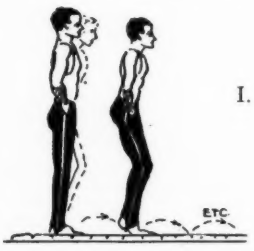
It provides a great deal of recreation, as there are many grotesque movements, due to inability to co-ordinate such variations as those suggested under 9 to 17, but it is surprising how quickly the co-ordinations are acquired after a little practice.

The activities are adaptable to both boys and girls at various age levels.

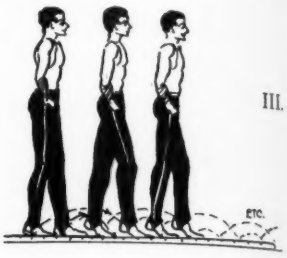
Tumbling Series I

I. a. Stand with the hands on the hips.
   b. Jump forward the length of the mats.

II. a. Position as in one.
   b. Jump backwards the length of mats.



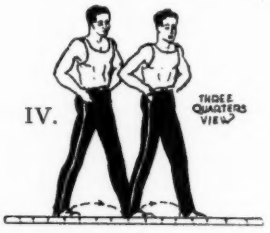
I.



III.

III. a. Walk stand position hands on the hips. (The left foot slightly ahead of the right.)
   b. Jump slightly forward changing position of the feet. (right foot forward and left back.) The jump is from both feet and land with weight evenly distributed on both feet. Continue advancing first left then right for the length of the mats.

IV. a. A stride stand position hands on the hips.

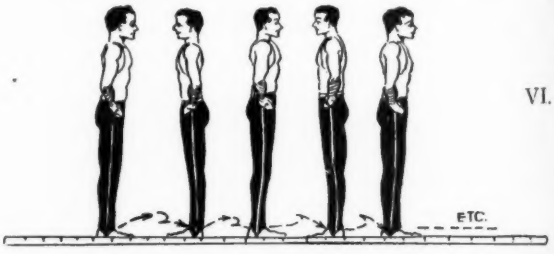


IV.

   b. Jump forward in this position the length of the mats.

V. a. Position as in IV.
   b. Jump backwards the length of the mats.

VI. a. Stand with the hands on the hips.
   b. Jump forward executing ½ turn left.
   c. Jump backwards executing ½ turn left.
   d. Jump forward executing ½ turn right.
   e. Jump backward executing ½ turn right, and continue alternating the turns until the end of the mats.

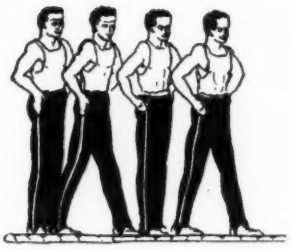


VI.

VII. a. Stand with the hands on the hips.
   b. Jump forward to a stride stand.
   c. Jump forward and bring feet together. Alternate "b" and "c" to end of mat.

VIII. Repeat VII jumping backward.

IX. a. Stand with the hands on the hips.
   b. Jump forward to a stride stand, raising the arms to side horizontal position.
   c. Jump forward and bring feet together, and replace the hands on the hips.



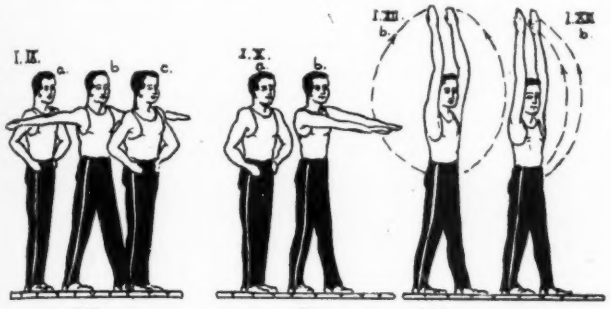
VII

X. Repeat IX (a).
b. Jump forward to a stride stand, raising the arms to front horizontal position.
c. Repeat IX (c).

XI. Alternate IX and X on each four counts.

XII. Repeat IX (a) and (c).
Vary (b) by raising arms sideward, upward.

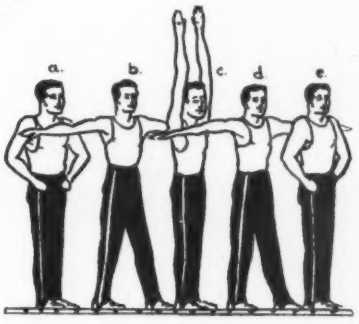
XIII. Repeat IX (a) and (c).
Vary (b) by raising arms forward, upward.



IX X XI XII

XIV. Alternate XII and XIII on each four counts.

XV. a. Stand with hands on the hips.
b. Jump forward to a stride stand, and raise the arms to side horizontal.
c. Jump forward and bring the feet together, raising the arms sideward, upward.
d. Jump forward to a stride stand, and lower arms to side horizontal.
e. Jump forward bringing the feet together and placing the hands on the hips.



XV

XVI. Vary XV by raising the arms to front horizontal on (b). Forward upward on (c), front horizontal on (d).
Vary by raising left arm to front horizontal, and right arm to side horizontal on (b). Left arm forward upward, right arm sideward upward on (c). Return to (b) and (a) in order.

(Concluded on page 50)

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Interpretive Rhythms

(Concluded from page 22)

spond to some lively music. They may then sit down in a large circle, generously spaced, and listen to the music that follows. This is the time for individual response when real creativeness shows itself. The music is played. All listen and no one is "expected" to dance. Those who wish to dance may raise their hands. Individuals who are chosen may do what they think the music "tells them to do." Often children will exhibit themselves paying no attention to the music. This should be overlooked until one is found who more nearly catches the spirit of the music.

The two or three interpretations may be discussed and the one most nearly fitting the music chosen. Care should be taken here to recognize something of value in the efforts of each one who has volunteered. In this way no one's feelings are hurt and a musical sensitiveness is being developed. However, it must be remembered that this is an "action" rather than a "conversation" period and must be guided as such.

The class should close with group work again, for very often children who have good rhythm will not ask to be allowed to dance. These can be picked out in the group and asked to dance alone. Self-consciousness is often overcome with this simple device.

If floor space permits, the rhythm class should be followed by a rest period. Children lie on the floor so that they are near no one else and the room is darkened. Some light, soft music may be played.

An interested teacher will regard the following list of Victor records as purely suggestive and will find appropriate music to suit her needs.

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	Boating on the Lake		Mirror Dance
	Skating		Witch
20736	Motive for Skipping		Tin Soldiers
	Camp of the Gypsies	20079	Waltz (Brahms)
20526	Rhythm Medley I and II		Light Cavalry
			Seranata
20162	Run, Run, Run		Tarantelle
	Jumping		Cradle Song
	Running Games		Evening Bells
	Three Waltzes		Elfin Dance
19881	Soldiers (March Schumann)	20350	The Bell
	March (Hollaender)		The Hunter
	March (Nutcracker Suite)		Memories
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A Christmas Suggestion

You may have friends who do not take the Journal of Health and Physical Education and who would enjoy receiving it for a Christmas present. Why not choose this inexpensive but very useful Christmas gift?

Growing Need of Physical Recreation

(Continued from page 8)

which now encircle us. Active participating recreation must be made so interesting and so accessible that the worker will choose it in the face of the insistent advertising of commercial amusements.

How can we approach this problem as it applies to women?

Classification of Employed Women

EMPLOYED women fall into two main classifications which roughly are Business and Professional, and Industrial. The latter includes all workers in factories (except office) and household employees.

The approach to each of these two groups seems to be different in the planning of active recreation. The business girl is accustomed to finding her way about, asking and securing information independently. She comes in and out of office buildings undismayed. The factory worker or the foreign born household employee lacks initiative, must be "hand-led," and likes to find her own group where she goes.

A. *Business women* are attracted by equipment organized in such a way that they are sure of acquiring skill in the shortest possible time. The present equipment of swimming pools, gymnasiums, park tennis courts, and golf courses now available to women are used 99 per cent by young business women.

Creation of more swimming pools, gymnasiums, tennis courts, golf schools, bowling alleys, archery ranges, etc., in suitable surroundings with sufficient advertising to make them known will find a response from the Business and Professional girl, and such equipment must be increased from year to year.

B. *The factory or industrial group* is the most difficult to reach. Again quoting Stuart Chase in *Men and Machines*—"the factory has so conditioned the worker that he has lost the very faculty of playing, and more free hours will simply mean more gasoline, more bleacher seats, and more speak-easies." Girls and women in industry have to be approached in a much more personal way than does the girl in a business office. The industrial girl has less money to spend on herself. She turns over her pay envelope to her family and is allowed little money for her personal needs, which means that for groups of industrial girls special ways must be found of financing their athletics.

As an example of what good leadership can accomplish, I will tell you of one experiment.

For two years the Chicago Y. W. C. A. has carried on an interesting experiment with groups from different factories. The girls' interest was in athletics, but they did not know how to find an outlet for themselves. The industrial secretary visited the factory and invited groups to come to the building and talk it over, she helped them plan how they could raise money, and secured the cooperation of one of the physical directors and the use of the gymnasium. They raised money by selling

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candy in the factory or giving a dance for their factory people which netted to each team group the $25.00 needed to insure coaching and the organization of a schedule of games in the gymnasium for a period of ten weeks.

Standards were kept high, a protective medical examination was given each girl before she began strenuous play, proper costumes, coaching, conditions of play, etc.—all these were observed. In some cases the medical examinations alone, given by a well trained woman physician, has made life over for a young woman. One case may be given here as an example. A young woman of 30 years working in one of the large packing houses of the city did not seem well to her personnel worker but she insisted her family physician had said there was nothing wrong. When the doctor went over the girl preparatory to her participation in swimming signs of an overactive thyroid were detected. The girl was sent back to her family physician who, with that suggestion, gave her proper treatment—she is swimming in the Y. W. C. A. pool, has gained fifteen pounds in four months, and is happier and doing more efficient work.

Some 150 girls have been helped to achieve their desires and profitably use leisure time in active play this year through this experiment. But it has required an industrial secretary who knew how to help an industrial group realize its desires to bring this about, plus a woman physician, and a trained physical director in the gymnasium who would handle them when they got there. In other words, we are dealing here with a group with little initiative whose members have come to feel that very little is possible to them. Leadership is the primary requisite.

The equipment and leadership for active recreation here outlined is meagre beyond words in comparison to the numbers of employed women in Chicago both Business and Industrial. Chicago is probably different only in size from other cities in the Middle West.

Important Reasons Why Leadership in this Field Must Be Increased

In contrast to the lack of leadership and equipment among women of industry and business, we have the astonishing fact (brought out by Mr. Avery Brundage, the President of the Amateur Athletic Union of the United States) that practically all of the girls who have taken part in the Olympic games have come from the ranks of the employed; they are not school or college girls. This means that these girls have been in touch with little or no specialized training by women directors who are prepared to direct in the training for sports, and yet the *training for the sport is the most important factor in determining the attitude of the individual towards her own health and towards the sport itself.* Those girls who have been taken into the Olympics have usually been culled out by groups of athletic club members who are interested in sending "Bigger and Better Runners, Divers, Jumpers, etc.," to represent their club or country and perform before the world. There has been little or no thought of the welfare of the girls themselves.

In face of the almost entire lack of trained leadership to date among employed groups, it is alarming that the creation of an American Olympic women's team keeps before the employed woman a *sensational interest* in sport. This is stimulated in local communities by some sporting goods houses and some other firms, who for mercenary or purely advertising purposes finance girl's teams to tour the state with the firm's name on the back of the girls' sweat shirts. Newspaper sport reporters find the sensational interest in women's sports negotiable news and some newspapers have organized large track meets, etc. into which the industrial girl is attracted. Here again the physical and psychological well being of the girl herself is not considered.

Athletics are no doubt of real advantage in the maintenance of health and the development of character. It is well to develop the ability to achieve in spite of obstacles, but it is not necessary to carry competition to that extreme line evidenced in the Olympics in order to achieve the health and character building advantages involved. *This extreme emphasis in fact puts in the mind of the participant such a desire to win as to eclipse the actual joy of play itself.* Further this extreme emphasis robs the mass of possible industrial play groups of the use of equipment and leadership.

The question as to whether employed women in general can be attracted to active play is a large part of the problem. The organization of a city wide Play Day in Chicago in June, 1928, failed almost completely to attract employed women—in spite of plans made especially for them; it was a very clear picture of the lack of interest on their part. The interests and practice of

TABLE IV

Ranking of Activities According to Per Cent of Women Performing or Desiring to Perform Them

Activity	No. of Women Performing the Activity	No. of Women desiring to perform the Activity	Total Number Performing and Desiring to Perform the Activity	Per Cent of Women Performing or Desiring to perform the Activity	Rank
Social Dancing	105	45	150	66.5	1st
Swimming	72	67	139	66.7	2nd
Walking	98	18	116	51.5	3rd
Tennis	43	72	115	51.1	4th
Formal Work	67	27	94	42.4	5th
Hiking	55	34	89	39.5	6th
Ice Skating	41	43	84	37.3	7th
Horseback Riding	10	69	79	35.1	8th
Dance Steps	40	36	76	33.8	9.5th
Bowling	35	41	76	33.8	9.5th
Basket Ball	16	59	75	33.8	11th
Running	47	21	68	30.2	12th
Rowing	26	34	60	26.6	13th
Fancy Dancing	16	36	52	25.1	14th
Roller Skating	22	29	51	22.6	15th
Folk Dancing	11	33	44	19.5	16th
Golf	8	35	43	19.1	17th
Volley Ball	9	33	42	18.6	18th
Baseball	13	25	38	16.8	19.5th
Throwing	23	15	38	16.8	19.5th
Apparatus Work	17	15	32	14.2	21st
Climbing	21	9	30	13.3	22nd
Croquet	17	12	29	12.8	23.5th
Fishing	13	16	29	12.8	23.5th
Rifle Practice	2	25	27	12.0	25th
Broad Jump	12	13	25	11.1	26th
High Jump	12	11	23	10.2	27th
Dodge Ball	9	12	21	9.3	28th
Three Deep	12	8	20	8.8	29th
Quoits	6	12	18	8.0	30th
Archery	1	14	15	6.6	31.5th
Table Pool	5	10	15	6.6	31.5th
Fencing	0	14	14	6.2	33rd
Soccer	5	8	13	5.7	34th
Ice Hockey	2	9	11	4.8	35th
Polo	0	9	9	4.0	36th
Hockey	0	8	8	3.5	37th
Trap Shooting	0	6	6	2.6	38th
Hurling Javelin	1	4	5	2.2	39.5th

Study made by Bertha Goetter, University of Pittsburgh.

business women along lines of play have been studied by Miss B. A. Goetter in a Master's thesis, University of Pittsburgh. Miss Goetter, by interviewing 225 business women, secured a list of 41 different activities in which they were interested. I give the table here; the order of their popularity is surprising. Notice those which head the list.

The preference for formal work is probably due to the fact that that is one thing in which some skill has been achieved. I have not found reports of other similar studies made of a group of industrial girls and their desires.

Middletown's experience is that the industrial girl wants a generation or more later what the business girl wants today—we may therefore expect her to gradually respond to any efforts made to interest her in these same activities.

The active recreational life of the employed woman of today has no doubt been conditioned by her early life.

Social taboos have had a large effect in keeping girls and women from learning and participating in sport. Nevertheless women today desire to perform more play activities than they know how to do. It is an accepted fact that no one enjoys doing what he or she cannot do well.

The school life can serve the future generation by offering to girls a great variety of plays and games and developing sufficient skill in one, two, or more of these, so that once having known the joy of play she will continue to play in adult life. This is perhaps the most fundamental contribution which the physical education profession can make to any plan for developing play activities among employed women. It is gratifying to see the growing attention given to this aim by High School physical education departments. You will be interested in Miss Goetter's general conclusions of her study of recreational interests of employed women.

1. It appears that a condition of deficiency rather than one of excess characterizes the individual progress of physical recreation of the women in the group studied. Since one fifth of the women were not inclined to participate in any of the forty-one activities and since one third were interested in only one or two of the activities, it is clear that no enduring interests were developed by the work in physical education carried on in high school by a large part of the women. The data analyzed forcibly raises the question: Are the needs and interests along the line of physical recreation of adult women anticipated in the curriculum of physical education presented in high school? A negative answer to this question is suggested by our study.

2. The variation in the tastes and interests of individuals in the selection of the form or forms of physical recreation to engage in is clearly reflected by the results of our study. No activity was found that possessed an appeal that was universal. On the other hand each of the forty-one activities received some mention in the replies of the two hundred and tweny-five women. It is clear, therefore, that the curriculum in physical education, if the responsibility for the discovery of personal interests is to be accepted, must provide opportunity for wide exploration. The need for an increase in the number of different forms of physical recreation included in the curriculum in physical education is quite apparent.

3. The activities included in the curriculum in physical education in general are not those in which women are most interested after they leave school. The activities learned in school by a large part of the women, swimming and formal work excepted, rank low among the activities that were continued in adult life. On the other hand the activities, dancing, walking, hiking, tennis, ice skating, and other activities that were learned outside of school during girlhood are those which have carried over in the greatest degree into adult life. Notwithstanding the value for physical development of basket ball, volley ball, and similar activities common in physical training, is there not justification for increased emphasis by physical education, on those activities which combine interest and developmental value? An affirmative answer to this question is not only clearly indicated by the results of this study but made imperative as well since many of the women did not have opportunity to learn these interesting activities in life outside of school. It is the opportunity of the school to provide this experience.

Conclusion

For the present generation of adult women workers, I would suggest three ways in which present members of the physical education profession can be of help.

One way is through offers of trained volunteer or only nominally paid leadership to community groups in industries, churches, etc., at least until such time as public opinion brings about increased leadership in municipal recreation systems, park boards, social agencies, etc.

Secondly—leaders should thoroughly acquaint children and adults with the best standards in the field for women's athletics, so that they may learn what resources are available to them in the way of helpful, patient and wise guidance. The present enthusiasm there is for sports among employed women should be diverted from the sensational interest in basket ball alone to other varied forms of play. So that every girl may find her place in play, a safe guiding principle would be the promotion of all games that can be enjoyed without the stimulus of an audience.

Thirdly—Every physical educator should demonstrate that she believes what she teaches, namely, that every one should have a contagious play spirit. If there is ever any carry-over, it is certainly possible to carry into all of life the spirit of play. The industrial worker, the office girl will live a fuller life if her part of the job can be seen as her part on the team; if obstacles can be looked upon as worthy opponents and the zest of the game become the zest of life.

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Folk Dance Costumes

(Continued from page 29)

head-dress is a small shawl folded in a square and worn on top of the head. Soft white blouses with puff sleeves and red armlets trimmed with gold braids, a black fitted velvet bodice and a full red skirt make up her dress. Her costume is completed by an apron decorated with very broad bands of embroidery at top and bottom, white stockings, strapped sandals, necklaces, beads and earrings. In some places the Calabrian dress consists of two very full skirts; the top one being pulled up and caught in the back kirtle fashion. The heavy aprons are very gorgeous in embroideries and are fastened by a chain belt around the waist. The stockings are of very bright patterns.

Crossing over to the Island of Sardinia the traveler finds a most beautiful peasant dress of blues and reds, the peculiar tones of which are typically Sardinian. The costumes are many and varied, but the most artistic are to be found in the northern districts, the women of Osilo wearing the richest dresses on the Island. Rich reds enter into the gala costume of Osilo. The top of the head-dress is of red silk, very heavy and long, with a band of white silk, embroidered in a flowered pattern of many colors, at the bottom. Beneath this head-dress a fine white veil is worn. The skirt is of pleated scarlet silk with a wide embroidered band at the bottom.

The gorgeous costume of the woman of Aritzo is mostly of coarse-woven red wool trimmed in blue, green and yellow, with silver braid on the shoulders. The head-dress or scarf is of green and gold silk. The round-bottom apron is distinctive of the Barbagia region.

In Sesulo, the woman wears a small red cap edged with blue and tied under the chin with broad, red ribbons. Her blouse is white and has long and very full sleeves. The bodice is blue and decorated with red, yellow and white embroideries. The plain red skirt is trimmed with a blue stripe up the side; sometimes striped material is used in the costumes, but always we find the blue and red tones peculiar to the Island.

The men of Dorgali on the east coast are very picturesque in short white breeches and shirts, blue leggings and cap. On some parts of the island the cap looks like a stocking and is used to carry small packages. This style of head-dress is called a beretta. The Dorgalian costume is further set off by the rough *mastruca* (sleeveless jacket) of black lamb's wool with pockets of hand-tooled leather in artistic designs. Over their shoulders they carry a red and white striped bag and in their hand a staff. These costumes are slowly giving way to cheaper and less distinctive garments.

The costumes of Sicily are not very picturesque. The men always wear a shawl, usually plaid, around the shoulders. The women go barefooted.

The Genoese women go about the streets with white lace mantillas thrown over bonnetless heads.

SUGGESTED COSTUMES

Spain

Man—Head-dress: Broad brimmed and medium crowned

black hat. Shirt: White muslin shirt and red tie. Trousers: Short and tight-fitting, dark green or black breeches. Footwear: White stockings and black or red shoes. Accessories: Wide red sash.

Woman—Head-dress: High comb and black mantilla; hair arranged in coil at back with red or yellow rose over one ear. Blouse: Low and fitted waist of same material as skirt. Coat: Bolero jacket of velvet trimmed with a ball fringe. Skirt: Satin skirt of white, red or yellow trimmed with black lace flounces headed by bands of velvet or gold braid. Footwear: Colored hose and high heeled pumps. Accessories: Much jewelry.

SPECIAL COSTUMES

Toreador—Head-dress: Banged hair combed forward over ears. Shirt: White shirt with a red tie. Vest: Red sateen. Coat: Dark blue sateen cape over a red sateen coat trimmed in white braids. Trousers: Short red breeches. Footwear: Red stockings and black shoes.

Peasant Girl—Head-dress: Yellow rose and white mantilla. Blouse and skirt: Brown (red or yellow) with short, sleeveless, white blouse trimmed with lace and embroidered ruffle. Apron: White muslin finished with two narrow blue ruffles. Footwear: White or colored stockings and black shoes. Accessories: Yellow shawl with embroidered blue flower, fringe draped over one shoulder, fan and jewelry.

PORTUGAL

Man—Head-dress: Dark blue stocking cap. Shirt: Blue and white checked material banded in solid blue around sleeves and neck. Vest: Dark red. Trousers: Long, dark blue breeches. Footwear: White stockings and black shoes. Accessories: Brown scarf thrown over shoulders and a wide, dark red sash around waist.

Woman—Head-dress: Kerchief of red striped material. Blouse: White with red figures or trimmings. Skirt: Blue skirt with an over-skirt of red and white striped material. Apron: White with embroideries of many colors. Footwear: White hose and black or colored shoes.

ITALY

Woman—Head-dress: White linen shawl folded in a square and worn on top of head. Blouse: White blouse with round neck and short full sleeves and bright colored kerchief. Bodice: Fitted, black velvet bodice decorated with silver braids and laced with silver cord. Skirt: Full red skirt trimmed with bands of green. Apron: White apron trimmed with bands of yellow, red, and black. Footwear: White stockings and black pumps. Accessories: Strings of beads, pins, bracelets and earrings.

Man—Head-dress: Small black hat with rolling brim. Shirt: Soft white shirt and yellow tie. Vest: Green satin worn open. Trousers: Black velvet knee breeches trimmed with silver buttons. Footwear: White or yellow hose and black shoes. Accessories: Roman striped sash around waist; earrings and rings.

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Conference Football Strategy

(Continued from page 26)

passed when the defensive line can overshift on a strong side play); and a better zone defense for passes. Under the new type of defense all zones are better protected on passes.

Where the seven-man line had formerly been used it was found that the ends and the tackles, as well, could not go in too fast on account of the lateral and the man in motion, for there was not sufficient support of the secondary in meeting this open attack. Now at the present time when a seven-man line is used, a box defense of backs is more common. This permits the ends to go in a little faster for there is a front line of backs to meet the lateral either on the strong or short side, and also the strong short side running attack is also better met. The box defense of backs with the seven-man line has not at all times proved the best defense against long forward passing, or against a formation in which the outside men are drawn out and the receiver goes down the middle.

The six-man line against the double wingback formation puts, of course, a heavy burden on the defensive tackles, for the tackle is always at the mercy of the wingback, particularly so if the defensive tackle attempts to play the seven-man line type of tackle, that is, by taking one step or charge and holding up. Where the 6-3-2 or the 6-2-2-1 defense is used, it seems better for the ends and the tackles to drive in fast. The defensive tackle may take his position directly in front of his offensive end (the defensive end fairly close to his tackle) and play on the wingback as he drives in. There will then not be too much spread in the defensive line, and the line can be quickly reinforced by the front line of backs. During the past season the 6-2-2-1 defense has proved good against an ordinary line and pass attack. Of course, the 6-3-2 defense proves the better against the double wingback running attack and lateral pass attack, for the ends and tackles can charge; but the 3-2 position of backs places the defense at the mercy of the short kick and also of a long pass attack where the receiver might be able to get by the second line of defensive backs.

Early in the season the six-man line was largely in the experimental stage, and in cases where this line defense was not found satisfactory it may have been because of the fact that the defensive tackle was attempting to play the old seven-man line type of defense, that is, more of a waiting game. This cannot be done, for the tackle puts himself at the mercy of the wingback. As the season developed it was found that, with a six-man line, both the ends and the tackles were charging more aggressively, for the front line of backs three yards back of the line could plug any openings in the line and were also in position to meet the lateral, should that play develop. With the ends and tackles going in fast, outside plays were quickly bottled up; and the lateral passer was so hurried that often his pass was poor, or he was so held up that the secondary backs were able to cover the outside on this play. Some teams using the 6-3-2 or the 6-2-2-1 defense made a practice of sending their ends in fast on an anticipated lateral, to tackle the passer or block the play.

As a result of the past season I believe that the six-man line will become more and more the standard line defense. However, we still find most defensive teams going into the seven-man line inside their own ten or fifteen yard line with the box defense of backs. The lateral pass must be defended even on the goal line.

We might conclude, then, that the seven-man line and the waiting end and tackle is passing out; and we might further conclude that the double wingback formation has brought about the box defense of backs, and even

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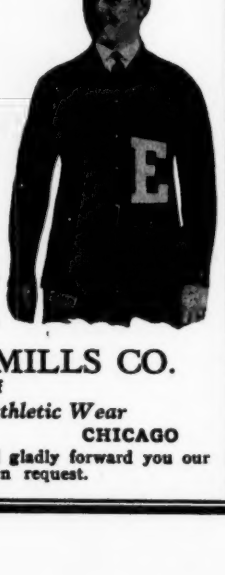

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the six-man line, although some may feel that the six-man line puts too great a burden on the tackle. But this burden is offset by the position of the backs. It is clearly recognized, too, that the overshifting of the defensive line is no longer sound football because of the strong short side plays, weak side laterals, and spinners to the weak side. The six-man line has proved that it can stop the line attack thus giving a better secondary defense to meet the wide laterals and to cover more completely all zones on pass defense. We do not advocate, of course, blind charging on the part of the tackles, for in this way they can easily be timed out of the play. Weak side tackles must always be alert as to how they drive in, for most short side plays are developed to time the tackle out of the play. The six-man line, however, particularly against the double wingback, necessitates an aggressive charge on the part of the tackle. Guards, too, can be aggressive, for with the six-man line there is not much necessity of a guard dropping out to defend on passes since there are already five men back of the line for that purpose. After all, regardless of what points may have been brought out in favor of either the six-man line or the seven-man line, defenses still will largely be built up to meet certain types of attack.

The forward pass defense for the 1930 season has been largely a zone defense, the same as in 1929. It will always be true, of course, that special defenses will be built up for special types of forward pass attack; but generally speaking, with the six-man line, the zone defense on passes has become largely the standard defense. Personally, I do not always agree with the zone defense on passes. I think the type of pass attack must be considered. This is particularly true in regard to the long spot pass. Most defensive backs in playing the zone defense have a tendency to watch the ball too long. Under certain conditions certain receivers must be covered early.

Teams that still use the seven-man line have a tendency on passes to have the ends hold up and cover flat territory. If the box defense of backs is used, the front backs will cover both flat and deep. If the ends have the flat territory well protected, then the backs may cover deeper territory. The two backs farthest back on the defense may cover deep men or play the ball. The center usually drops directly back 10 to 12 yards and covers that zone back of center.

With the seven-man line and the diamond defense of backs the weak side end usually covers flat territory, the fullback covers flat to the strong side, the two backs cover the down and out runners, the safety man plays the ball or the long man down, the center drops out and covers the territory back of center and to the weak side. On certain downs, when the pass develops early, the guard or tackle has also dropped back.

There has not been consistent aggressive rushing of the passer. Passers have seemed to be able to get the ball away. This may be due to the fact that passers are being given better protection, or it may be due to the fact that more men out of the line are dropping back

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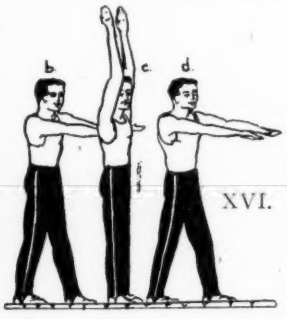
to defend the pass. Passers are usually protected by the two guards and one back. In my estimation, rushing the passer is an effective means of pass defense.

The 1930 season did not show any special type of defenses for the blocking of kicks. The kicker, of course, is usually rushed hard when well within his own territory, and when on his own goal line. Quite often out in the field the weak side end would drop back and attempt to spike his end early. Quite often, on sure kicks, both ends dropped back a little. Defensive backs, as a rule, trailed the opposing ends down the field and attempted to spike late as the ends slowed up to tackle the receiver.

In comparing this review with that of the season of 1929, it can be seen that the styles of play, special types of attack, and defenses as well, have been largely the same as that of the 1929 season. Yet there has been some evidence of improvement, both on offense and defense; slight innovations in regard to attack which show a further evolution of the modern game; and developments in defense during the past season have been more marked than that of previous seasons. Resourcefulness in defensive measures has tended largely to equalize offensive and defensive strength.

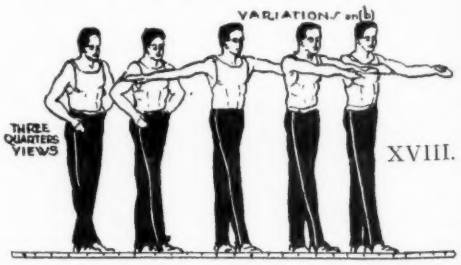
Introductory Tumbling Exercises

(Concluded from page 41)



XVII. a. Stand with the hands on the hips.
b. Jump forward to a stride stand.
c. Jump forward and cross the feet, left foot in front.
d. Alternate (b) and (c) with first the left foot and then the right foot forward. Vary with any of the foregoing arm movements.

XVIII. a. Stand with the feet crossed, left foot in front.
b. Jump forward crossing the feet with the right foot in front.
c. Alternate (a) and (b).
Vary with any of the arm movements.



All of these arm movements may be used with the individual jumping backward instead of forward and many others may be suggested by the pupils or teacher.

Report on Fellowship Awards

(Concluded from page 13)

2. Collection of information about nominees and consideration of same by Committee on Fellowship Awards with a view to selecting list to be recommended to National Council. In making up the list, a favorable majority vote shall be required for each candidate recommended. A standard form shall be devised and used by the committee in its history taking, which form shall be filed permanently with the records of the American Physical Education Association.
3. Approval of committee nominations by the National Council.
4. Notification of each accepted nominee by letter from the President and National Council, said letter to be an expression of appreciation as well as an announcement.

It is the opinion of the committee that posthumous awards properly belong within the function of the Committee on Resolutions, and, further, that Fellowships should not be awarded posthumously.

The committee recommends that no limit be set to the number of Fellowships conferred upon physical educators in a given year, although it is suggested that the committee on selection keep the number within reasonable limits in so far as it is possible to do so without danger of being charged with discrimination.

In the case of educators and scientists as distinguished from physical educationalists, it is recommended that no more than one person so classified be honored at any one convention, thus, one award could be made at each regular district convention and one at the national convention.

Presentation

It is recommended that the presentation of awards be made by the President of the American Physical Education Association, or his appointed representative, at national, sectional, and state conventions.

It is further recommended that in case the recipient is unable to attend the occasion, the presentation be announced to the members in convention, and the award forwarded to the recipient.

CORRECTIVE
PHYSICAL EDUCATION

The following articles were chosen from the American Physical Education Review as illustrative of what may be obtained on this subject from the files of this magazine:

Corrective Exercises, by J. H. McCurdy .....Dec. 1929
What to Do for Painful Feet, by Miriam Arrowsmith..Jan. 1928
An Aid to Posture Training, by Julia E. Lancaster....Mar. 1928
Pelvic Obliquity, Its Measurement and Importance in Physical Efficiency, by M. Esther Shaw.....Dec. 1928
Posture with a Suggestive Method of Grading, by Carolyn Tarbell .....Dec. 1928
Picture Aids in Teaching Corrective Gymnastics, by Julia E. Lancaster .....Jun. 1927
Proper Weight Carrying on and by the Foot, by E. H. Arnold .....Nov. 1927
Good Posture for Women, by Alice L. Goetz .....Jan. 1926
Corrective Gymnastics in a Physical Education Program, by Lillian C. Drew .....Mar. 1926
Postural Skills Essential to Health, Efficient Action, and Joyous Living, by J. H. McCurdy .....Sept. 1926
Bad Posture or Deformity, by E. H. Arnold .....Nov. 1926
Corrective Gymnastics as Applied to School Work, by Florence A. Meyer .....Nov. 1926
Work-a-Day Tests of Good Posture, by C. Ward Crampton .....Nov. 1925
Putting Punch Into Posture, by Florence D. Alden....Apr. 1924
The Routine for Harvard Freshman Graded "D" in Body Mechanics, by Wm. H. Geer .....May 1924
Physical Education in Heart Cases, by Eugene C. Black ..... Jun. 1924
Observations on Corrective Exercises in Medicine, by F. H. Ewerhardt .....Jun. 1924
Corrective Exercises, Individual Results in Classes, by Louisa C. Lippitt .....Jan. 1923
Corrective Games, by C. L. Lowman.....Apr. 1923

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Test Scoring in Physical Education

Continued from page 17

that is, by computing the point values as percentiles, 10, 20, 30, etc.

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Disadvantage—The possibility of rather cumbersome machinery for scoring; difficulty of administration; uncertainty as to what the scale means.

VII. *Scale of Increasing Point Values for Equal Performance Increments.*

There is a rather wide spread opinion among persons in the profession that as we go up in the scale of performance an increasing number of points should be given for equal intervals of performance. This feeling is based upon observation in the field,—that, as the individual nears the peak of his own perfection in a given event it becomes increasingly hard for him to decrease his time in a running event or increase his distance or height in a jumping event. If this observation be true, it is quite logical that a scoring scale be made which takes this principle into consideration. The graphic representation of such a scale is evidently not a straight line as in VI. but a parabolic curve of some sort which starts upward from the base-line slowly and increases more rapidly as the distance between the baseline and the curve widens.

McCloy[11] has given us a rather detailed account of such a performance curve and has advanced the theory that the formula for the curve may be $y=x^2$. This formula means that in plotting the curve the ordinate increases as the square of the distances laid off on the base line. In laying off a curve of this type a number of things must be taken into consideration.

First: The curve should start at a point which will represent zero performance for the group in the event in question. That is, the zero performance point for 12 to 15 yr. old boys in the standing broad jump will not be the same as the zero performance point for college men.

Second: The units to be used in laying off the curve must be of equal value with respect to the curve for each event. That is, we cannot arbitrarily choose 1 second in the dash and one foot in the broad jump. These intervals must mean the same thing relatively to each curve that is plotted.

Third: The starting point for scoring in each event should be selected to represent a definite performance which can actually be designated. Otherwise, point values for the various events will not be meaningful. Care must be taken to see that the portion of the curve is used which represents the performance range for the event in question.

Several scales have been devised which recognize the principle involved in this type of scoring system. It is very doubtful, however, whether this recognition has been accomplished by any other means than individual or group judgments. Thus the University of Oregon Physical Ability Pentathlon[12] gives one point for a two inch increase in the bar vault in the lower range of the scale, two points for a two-inch increase in the middle range, and three points for a two-inch increase in the upper range.

The scoring for some events in the California Decathlon is built upon the same plan.[13] For example, take the Basketball Throw for Distance (7th and 8th grades). At the start the points first increase one per foot, then two per foot, then three, then four and finally five.

Advantage. A graded scale is set up which recognizes more skilled performances by a larger number of points per increment of time, distance or height than less skilled performances.

Disadvantage. Each individual in a given group is assumed to have the same peak of performance and it is generally recognized that this assumption cannot be made. For example, take an unselected group of college men. At the start of a training period in the 100 yard dash, there will be quite a range

[11] McCloy, C. H.—A Statistical and Mathematical Method of Devising Athletic Scoring Tables. Am. Phys. Ed. Rev. 26:1-12 (January, 1921).

[12] The Pentathlon—A Physical Ability Test. Am. Phys. Ed. Rev. 29:30 and 29:88, (Jan. and Feb., 1924).

[13] California Decathlon Scoring Charts. Published by the Am. Phys. Ed. Assoc. and copyrighted by Clark W. Hetherington.

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in the performance ability of these men. Some men will have 11 seconds or better to their credit and some will do worse than 13 seconds. The 11 second men may cut their time down to 10 2/5 seconds or even 10 1/5 seconds, but we cannot expect the same performance from the 13 second men. In the case of an individual man, who originally ran the 100 yards in 13 seconds and after a given training period cuts his time down to 11 4/5 seconds, his peak of perfection may be close to 11 4/5 seconds. Now while he will get more points for a decrease from 11 4/5 to 11 3/5 than he does from 13.0 to 12 4/5, yet he will not get as many points relatively as the individual who cuts his time from 10 2/5 to 10 1/5. Hence, the principle does not take account of individual cases, and yet, as a whole, it recognizes the more excellent performance increases by larger rewards. This is a matter that requires further investigation.

VIII. *Larger Rewards per Increment of Performance Around the Average*

The scheme has been devised by the Physical Education Department of Detroit for use in its Boys' Decathlon inasmuch as it seemed desirable to present an incentive for bringing the boys up to average ability in each of the ten events rather than to over-exert in any one.[14] The scoring scheme has its largest increases in point values per increment of performance around the average in each event. Above and below average performance the point values decrease for each increment until they are comparatively small at the upper and lower ends of the scale. Thus in the standing broad jump an improvement of two inches around the average means an addition of 80 to 90 points, whereas improvements of three inches at championship or "dub" performances will net only 10 to 20 points.

The greatest award, then, comes from an effort to bring up to average an event in which one is weak. Likewise, little reward is given for improvement beyond this point.

Advantage. Such a scheme is apt to accomplish its aim, that is, bringing boys up to average ability in all ten events.

Disadvantage. The scoring system, however, is arbitrarily and empirically set up and it is very doubtful whether its principle has any scientific evidence for its foundation. Some one will ask immediately, "Why shouldn't we reward ability wherever it is found?"

IX. *The T-Score*

An extremely convenient score to use in test scales is one made popular by McCall which he has chosen to call the T-Scale. T-Scores are based on the standard deviation of the distribution in question and range from 0 to 100. The zero point on the scale is taken as the value of the performance at five standard deviations below the mean and 100 points as the performance at five standard deviations above the mean. One T-Score, therefore, represents 1/10 of a standard deviation. The mean or average performance is always at 50 and each 10 points above or below the mean is one standard deviation. McCall's original scale was worked out on unselected 12 year olds, but because of the fact that standard measures are comparable within the same group, T-Scores may be used to apply to any group. Statistical references should be consulted for further information on this scale.[15]

Advantage: The scale covers a wide range of ability. All T-Scores are expressed in terms which are comparable in all events and can therefore be added. A glance at a T-Score reveals immediately where the student stands with respect to the mean of his group.

Disadvantage. The nature of the T-Scale is such that point values usually range between 20 and 80. This will mean that in an event like the chin or dip, scored according to number of times a given stunt is done, we shall have an award of from 20 to 25 points for zero chins or dips. However, this may not be the fault of the scale so much as the fact that we are not distinguishing between the various zero performances. As a matter of fact we should have our measuring instrument so arranged as never to have zero or perfect performances.

[14] Pearl, N. H. and Brown, H. E. Health by Stunts, p. 163. The Macmillan Co., 1919.

[15] McCall, W. A.—How to Measure in Education. Brace, D. K.—A Method of Constructing Athletic Scoring Tables. Am. Phys. Ed. Rev., April, 1924. Smith, H. L. and Wright, W. W.—Tests and Measurements, p. 533.

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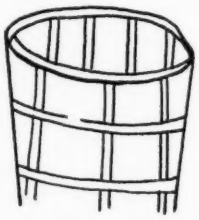
Mass Teaching in Basket Ball Skills

Concluded from page 38

circular base and two boys standing on their shoulders holding a peach basket. Of course there are two such pyramids, one at



each end of the court. The pyramids go up as soon as the coach commands the basket ball game. (See Diagram G.)

Players consist of squad leaders, ten in all. Five wearing their regular white jerseys and five wearing blue jerseys under their white ones. When the coach commands the basket ball game, the boys representing the blue team take their white jerseys off and hand them to someone on the sideline in their squad to take care of. (See Diagram G.)

Cheer Leaders—the remaining four squad leaders become cheer leaders. Two cheer leaders for each side, for the purpose of having organized cheering, during the course of the game. (See Diagram G.)

Referee is the head coach.

Time of Game—a three minute game should show the elements of basket ball as practiced in the beginning of drill. This should include tap off plays, pivots, passing, etc. At the close of the game both teams give each other a cheer and run to their respective lines or side. The men in the pyramid run to their lines also.

Method of Exit from Gymnasium—at close of basket ball game both lines face in the direction of the arrows, (see Diagram G) and exit, each in a straight line, running in direction of the arrows. The head coach dismisses the group and waits until everyone is off the floor.

Working Suggestions

Length of Drill—About 12 minutes. The time may be increased by doing each number for a longer period.

Head Coach has a megaphone, and must be a boy with a voice that carries. Coach wears a blue sweater and white duck pants.

Players—i.e., all participants wear white athletic jerseys and running pants with stripes on pants. Stripes may be cut out of cambric cloth.

Squad Leaders and *Head Coach* may have small cue cards concealed in the palm of their hands, to aid them in their drill.

DIAGRAM F

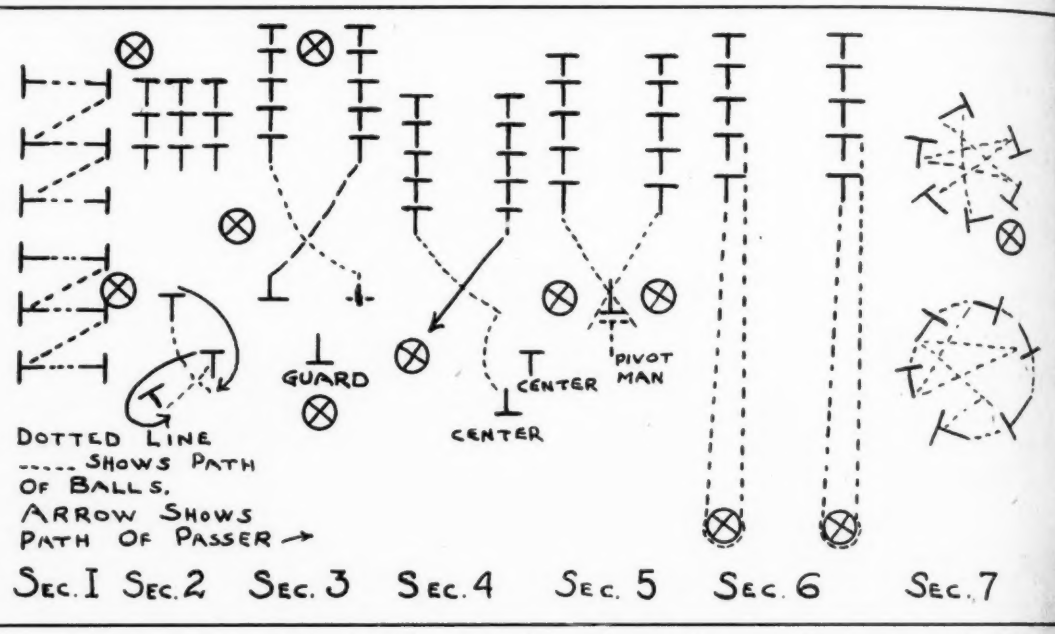
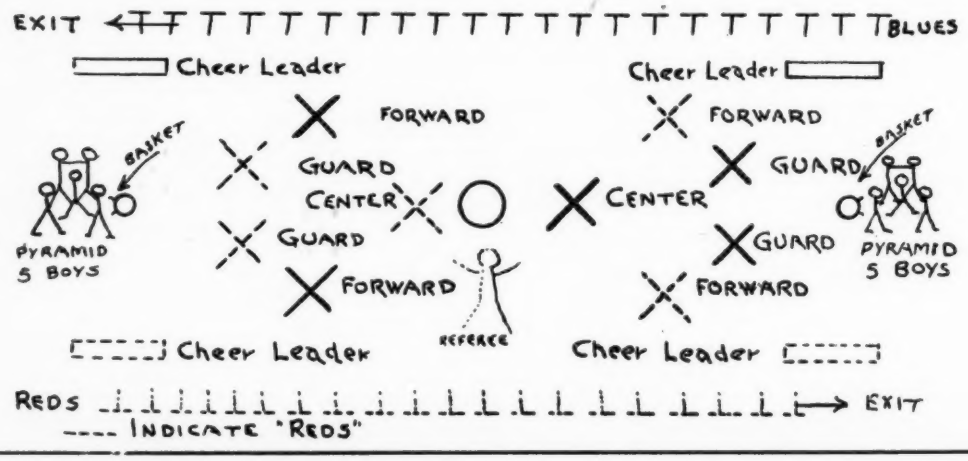


DIAGRAM G



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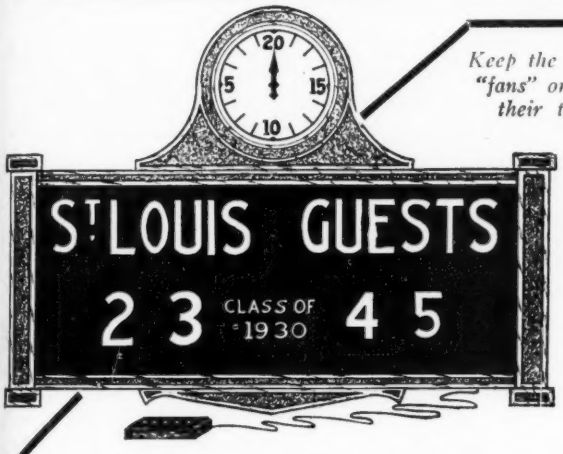

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THE CHICAGO NORMAL SCHOOL OF PHYSICAL EDUCATION

Eastern District News

(Concluded from page 32)

program for adults. It is interesting to note that immediately following the offering of this opportunity more than fifty women and fifty men enrolled for these classes, which are supervised by the members of the regular physical education staff.

For the first time in this State there has been a Play Day for boys. Mr. Frank Crozier, director of physical education for men in the Bridgewater and Fitchburg Normal Schools, organized and conducted such a day at the Bridgewater Normal School on Saturday, October 18, for groups of school boys from the surrounding towns.

The program was not an elaborate one but 103 boys gathered in the gymnasium at nine-thirty for organization. The program was as follows:

10:00—Games on the athletic field.
12:30—Lunch—(Brought by boys from home).
1:30—Social time at normal school.
2:30—Soccer football game.

This is one of the most interesting experiments that has been tried and since it was such a success should encourage other directors of physical education for boys.

The Boston Board of Officials for Women's Major Sports is well under way in another active season. The Hockey Rating Committee has been especially busy in attempting to provide opportunity for every applicant who desires a rating. Many of the public and private schools have cooperated in permitting candidates to practice umpiring during afternoon hockey practices. Rating judges have been present at the Saturday and Sunday club practices. To date (November 2nd) 33 have been tried out for a rating or to be rechecked on last year's rating, 19 have passed with "C," 4 have either attained or raised their rating to a "B." The method of judging and the stipulations of the National Rating Committee are being adhered to as nearly as possible.

The Swimming Committee is composed of swimming coaches from physical education schools and colleges in and around Boston. It has had two meetings at which an attempt has been made to standardize the judging at swimming meets.

The Basketball season begins in December. The Committee is anticipating a busy winter schedule. Last year 91 examinations were given, 63 candidates were successful. The rating given is recognized as a national official rating.

During a two weeks' exhibit of State Governmental Activities in the Commonwealth Armory, two of the State Normal Schools staged demonstrations of the work of their physical education departments on content and method from grades one through six.

Marjorie Bouvé.

Physical Education and Health

(Concluded from page 12)

beyond which on either side life cannot exist, must be carefully analyzed so that proper coordination and balance may be maintained.

This whole profession must view health again as a product of oneness of mind and body. Health must be viewed from its bio-physical, bio-chemical, and neural-emotional standpoints.

The acme in life must be considered from the standpoint of personality and character to which even the important element of health must always remain secondary. Personality must be viewed from the bio-physical, bio-chemical and emotional standpoint. The emotions represent the main springs of action. The rapidly changing world demands emotions which are high on the scale. The emotion of fear which held together the tribal group can no longer function. Emotions express the real "wants" of the individual. These wants are conditioned by society. Unless these wants are high on the scale, democracy will suffer the fates of Sodom and Gomorrah. Unless education builds into the individual leisure time wants which are high on the scale, the leisure itself will be the monster which destroys the industrial age which created it.

Physical education with its opportunities for building organic power in the bio-physical mechanism and with its opportunities to build a sane emotional life, represents one of the most potent forces in education.

A survey by Mr. B. E. Wiggins, Director of Physical Education, Columbus, Ohio, of Athletics in Junior High Schools in 28 large cities over the country shows the following results:

Question 1—Leading activities: Soccer or Speedball, 10; Basketball, 15; Baseball, 16; Track, 19; other sports, Swimming 6, Gymnastics 5, Football 2, Ice Hockey 1, Tennis 1. Intramural, only 6.

Question 2—Supervision: Physical Education Director, 20; joint 3.

Question 3—Eligibility: 17 have definite requirements.

Question 4—Responsibility of Preparing Teams: Instructor Physical Education, 17.

Question 5—Financial Support: Financed by school, 12; Board of Education, 3. No admission fee charge, 1.

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The Modern Delphic Games

(Concluded from page 15)

The author is proud of the fact that he has had a part in promoting the festivals and in training athletes to participate, but prouder still that Mrs. Sikelianos, who has done more than any other living person to

REMAINS OF THE DELPHI STADIUM
As seen from the East

arouse among the Greeks a consciousness of national pride in their glorious history, is also an American.

Two Experiments in Fatigue

(Concluded from page 20)

without any sign of recovery. Their findings were as expected under the second of these alternatives. The tracing lines after the minute of rest continued to shorten in length just as though no rest period had intervened. They found identically the same results when the muscles were stimulated electrically or when the subject contracted them voluntarily.

This, to my knowledge, is the first demonstration that this kind of fatigue in man is peripheral just as it is in the muscle nerve preparation of the frog with which all of us labored in elementary physiology courses. It also makes it just a bit easier to believe Lapicques' explanation of fatigue in terms of a change in the chronaxia of the muscle—but more of this some other time.

Herbst, Robert "Eine Klemme zur Abdrosselung tiefliegender Arterien" Arbeitsphysiologie 1928 I, 85.
Horiuchi, Kiyoshi "Uber den Einfluss der Gehirndurchblutung auf die Ermudung." ibid 1928 I, 75.
Zuravlev, I. N. and A. B. Feldman, "Uber den Einfluss der Blutstromunterbrechung auf die Restitution des ermudeten menschlichen Muskels" ibid 1928 I, 187.

Meetings in New York City, Christmas Holidays

Monday, December 29

Hotel Pennsylvania, 34th St. and Seventh Ave.

9:00 A. M.—Joint Meeting. State Directors and College Directors.

2:00 P. M.—Meeting Constitution Committee.

2:00 P. M.—Joint Meeting, Student Health Association, College Directors, and State Directors.

4:15 P. M.—Meeting of National Physical Achievement Standards Committee.

8:00 P. M.—Executive Committee of the A. P. E. A.

Tuesday, December 30

Hotel Pennsylvania, 34th St. and Seventh Ave.

All Day Meeting of the A. P. E. A.

9:30 A. M.—National Council and Advisory Group Meeting.

12:00 M.—Luncheon, with a "Good Fellowship" Program, $2.00 per plate.

2:00 P. M.—National Council Meeting.

6:30 P. M.—Dinner Meeting of the State Directors.

Wednesday, December 31

9:00 A. M.—State Directors, at offices of the National Recreation Association, 315 Fourth Avenue.

9:30 A. M.—Executive Committee, National Section on Women's Athletics, at offices of the National Recreation Association.

2:00 P. M.—Meeting of the National Collegiate Athletic Association.

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Society of Directors of Physical Education in Colleges.
American Student Health Association.

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New Books Received

Complete book reviews are contained in the RESEARCH QUARTERLY

Play Games. Albert B. Wegener. Abingdon Press. 182 pp. $2.00.

This book contains an original classification of play activities which is based upon the objective of the aggressor. All games of like objective are grouped together. The volume gives instructions for inventing games and modifying old ones so as to secure endless variety. The main sections are devoted to Physical Play (Speed Play, Strength Contests, Skill Play, Endurance Tests, etc.), Mental Recreation (Knowledge Tests, Mental Control, Reasoning Play, Creative Recreation, etc.), and Sociability (Socials and Parties, Social Singing and Dancing, etc.), and Play Pointers, which contains sample lists of games for various occasions and also organizing hints. The whole field of play material is covered in compact manner.

Personal and Community Health. Clair Elsmere Turner. C. V. Mosby Co. Third edition. 444 pp. $2.75.

This book has been completely revised and many new illustrations have been introduced. The first section deals with the hygiene of the entire body and includes a new chapter on water supply, food control, school hygiene, science of disease prevention, communicable diseases, individual hygiene, waste disposal, and public health administration. Two appendices are added on the control of communicable diseases, and matters pertaining to disinfection. An excellent text for health classes. Includes 62 illustrations and a working bibliography of health literature.

Growing Straight. Maud Smith Williams. A. S. Barnes Co. 137 pp. $2.00.

The title page says "growing straight" is a "new system of physical education with mental control as practiced by the North American Indians." Miss Williams states in Part I the differences between the Indian's system and the white's: his physical, mental, and ethical training; secrets and philosophy of life; breathing exercises; self control and self-expression; flexibility; sleep; his methods of overcoming fear and wrong. In Part II, she discusses Indian athletic exercises by which they acquire posture, carriage and poise. She gives a description of how they sit, use their muscles, etc., and includes a whole chapter (chapter X) on rhythmic exercises for grace and balance. Gives a very detailed description of exercises and dance rhythms. Popular rather than scientific treatment.

Deutscher Sportbau (German Sport Buildings). Published by Deutscher Reichsausschuss für Leibesübungen, Berlin W 35 Den Kurfürstenstrasse.

A book complete with beautiful illustrations on the best quality paper. Discusses the growth of facilities for swimming, gymnastics, and sports, and shows exterior and interior pictures of the outstanding architectural developments in these fields. Full explanations in three languages—English, German, and French.

Technique for the Woman Official. Wilhelmine E. Meissner, Women's National Officials Rating Committee. 19 p. 10c.

A practical booklet that presents in concise form information that will appreciably aid in making uniform the duties and procedure of the Woman Official. Such topics as qualifications, equipment and costume, arrangements, preliminaries for game, and fees, are adequately and clearly discussed.

The Book of Fencing. Eleanor Baldwin Cass. Lothrop, Lee & Shepard Co. 375 pp.

The latest book on this old and aristocratic sport. The author is a well known teacher of fencing. The book contains technical information of interest to both the beginner and the skilled fencer, but also much entertaining material on the history of the sport and on its leading contemporary exponents, both men and women. Physical Education teachers will also find the sections on class exercises, drills, and exhibitions most helpful. Many instructive diagrams of fencing positions and pictures of famous fencers are included.

Laboratory Manual in College Physiology. C. P. Hickman, Ph. D., Macmillan Co. 111 pp. $1.10.

Designed to meet the needs of courses in elementary physiology. Has been used by the author at De Pauw University. Contains the old familiar experiments in physiology and also many new ones emphasizing physical and chemical methods. Each group of experiments is introduced by a concise summary. The work is planned for one semester of six hours a week laboratory work or for two semesters devoting three hours a week to the subject.

Industrial Hygiene for Schools. Jesse F. Williams and Delbert Oberteuffer. McGraw-Hill Book Co. 271 pp. $2.00.

The authors state in their preface: "The purpose of this book is to present the important problems of hygiene in modern industrial life. Also, to point out guides for living that may be helpful to young men and young women on the threshold of the business or industrial world." The early chapters deal with modern health problems in general and the fundamentals of health for all persons, then follow chapters dealing with general and specific health hazards in industry and their prevention. Hygiene in the home, the health service in industry, state regulations, and industrial recreation are also given adequate treatment. The subject matter is well arranged and presented and is accompanied by many illustrations.

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Dwight Posture Model 47

SCHOOLS AND COLLEGES

American College of Physical Education 48
Arnold College for Hygiene and Physical Education 52
Bouve-Boston School of Physical Education 53
Chicago Normal School of Physical Education 55
International Y. M. C. A. College 55
Ithaca School of Physical Education 50
Posse-Nissen School of Physical Education 51
Russell Sage College, School of Physical Education and Hygiene 39
Sargent School of Physical Education 56
Savage School of Physical Education 57
Wellesley College 46

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Frederick B. Sprague Corporation 33
Sterling Stop Watch Co. 55
Thayer McNeil 42

GENERAL

Drake Relays 49
Hotel Harrison 46
National Tuberculosis Association 47

Cumulative Author and Subject Matter Index for Volume I

Numbers refer to: First—Number of Issue; Second—Page Number, e. g., 8:32 refers to No. 8 (Oct.), page 32.

No. 1, Jan.; No. 2, Feb.; No. 3, March; No. 4, April; No. 5, May; No. 6, June; No. 7, Sept.; No. 8, Oct.; No. 9, Nov.; No. 10, Dec.

ADMINISTRATION of Health and Physical Education
A Four Year Program for High Schools. Louis Kulcinski. 8:21.
Administration of Physical Education in the Light of General Education Needs. Jay B. Nash. 10:9.
Administration of the Health, Physical Education and Recreation Program. E. C. Broome. 4:20.
More Complete Living Through Physical and Health Education. John R. McLure. 7:3.
Objectives of Individual Physical Education for College Men. Harlan G. Metcalf. 9:10.
Organization Chart for Long Beach, California. Charles H. Hunt. 10:34.
Standards in the Administration of a State Program of Physical Education. 6:25.
ALDEN, Florence D. The Changing Emphases in Physical Education. 8:18.
ALDRICH, Clarence B. The Evolution of Gymnasium Clothing for Women. 8:15.
AMERICAN Physical Education Association
Developments in the American Physical Education Association. F. W. Maroney. 1:21.
ANDERSON, Charlotte W. Achievement Records in Swimming. 5:40.
APPARATUS, Work on. See Gymnastics.
ARCHERY
Archery as a School Sport. Frank Lynam. 4:26.
Maintaining Interest in Archery. Phillip Rounsevelle. 9:24.
Proper Archery Technique. Phillip Rounsevelle. 7:23.
AROUND the Country With J. E. Rogers. J. E. Rogers. 3:19; 4:19; 5:22; 6:30; 7:29; 8:32; 9:29; 10:21.
ATHLETICS
After-School Athletic Activities. Herman J. Norton, 3:16.
Studies in the Psychology of Athletics. Coleman R. Griffith. 3:9.
ATHLETIC Fields
Planning an Athletic Field. Walter H. Heideman. 9:38.
ATHLETICS, Effect Upon Women. See Women.
AWARDS
Point System for Boys' Physical Activities. Bernard J. Manfred. 4:36.
BADMINTON. See Sports, Newer.
BARTON, Helen M. A Weighing and Measuring Program. 9:12.
BASEBALL
Baseball in Japan. Ray Fisher. 5:9.
BASKETBALL
Basketball "Practice" Tournament. Arthur Genter. 2:50.
Coaching Methods for Girls' Basketball. Irene C. Ottis. 1:35.
Games, Relays and Plays for the Teaching of Technique in Girls' Basketball. Mamie Volpe. 2:34; 3:40.
Mass Teaching in Basket Ball Skills. Ralph J. Schnitman. 10:35.
Sportsmanship in Basketball Tournaments. W. R. Smith. 3:39.
Variations in Basketball Offense. Howard Beresford. 2:26.
Zone or Five-Man Defense in Basketball. George E. Cooper. 1:36.
BEEMAN, Clarence W. Beeball—Combining Football and Soccer. 7:38.
BENJAMIN, Joel R. A Method of Classifying Pupils for Physical Education Tests and Intramural Teams. 1:55.
BERESFORD, Howard. Variations in Basketball Offense. 2:26.
BOLT, Richard A. The Pre-School Child as a Health Problem. 1:12.
BOOK Reviews. 3:47; 4:51; 6:56; 7:59; 8:48; 9:54; 10:58.
BOOMERANG Tournament. Arthur Leland. 4:36.
BOWERS, Ethel
Special Spring Tournament for Grade School Girls. 3:46.
Squad Organization of Gymnasium Classes. 4:33.
BROCK, John D. Elementary Team Play in Soccer. 7:34.
BROOME, Edwin C. Administration of the Health, Physical Education and Recreation Program. 4:20.
CAMPING
Newer Tendencies in Camping Education. Barbara Ellen Joy. 5:26.
CERTIFICATION of Teachers
Uniform Certification Urged Upon States. National Committee Report. 7:19.
CHENOWETH, L. B. The Control of Ringworm. 7:12.
CHRYSSAFIS, Jean E.
Aristotle on Kinesiology. 7:14.
Aristotle on Physical Education. 1:3; 2:14.
CLASSES, Gymnasium
Squad Organization of Gymnasium Classes. Ethel Bowers. 4:33.
CLASSIFICATION of Pupils
A Method of Classifying Pupils for Physical Education Tests and Intramural Teams. J. R. Benjamin. 1:55.
CLINE, Ruby J. Recreation's Place in General Education. 4:8.
CLOG Dancing. See Dancing.
CLOTHING, Athletic
A Rental System for Administration of Athletic Clothing. Frank Kleeberger. 8:24.
The Evolution of Gymnasium Clothing for Women. C. B. Aldrich. 8:15.
COLEMAN, Ralph. Golf as a High School activity. 6.32.
COMMITTEE Reports
Preliminary Report of the Committee on Professional Ethics. Harry A. Scott. 9:19.
Report on Fellowship Awards. National Committee Report. 10:13.
Uniform Certification Urged Upon States; National Committee Report. 7:19.
COMMUNICABLE Diseases. See Diseases.
CONVENTIONS
Convention Program of the Southern Section, A. P. E. A. 2:49.
Mid-West Society Convention Tentative Program. 2:43.
The 1930 Middle West Convention. C. O. Molander. 6:21.
The 1930 National Convention at Boston. Carl L. Schrader. 6:3.
35th Annual Convention of the A. P. E. A. 2:56.
COOPER, George E. Zone or Five-Man Defense in Basketball. 1:36.
CORRECTIVES
Corrective Physical Education Practiced in Los Angeles City Schools. Sven Lokranz. 3:6.
Objectives of Individual Physical Education for College Men. Harlan G. Metcalf. 9:10.
Popularizing Correctives. Edith Saylor. 7:33.
The Road to Healthy Feet. Meyer M. Pollock. 4:23.
See also Restricted Gymnasiums; Posture.
COSTUMES. See Hill, Laura May.
COTTERAL, Bonnie and Donnie. The Romping Rompers. 5:16.
COWELL, Charles C. Bodily Posture as a Mental Attitude. 5:14.
COZENS, Frederick W. Test Scoring in Physical Education. 10:16.
CRAPSER, A. Lester. National Physical Achievement Standards. 1:14.
CROSIER, Frank. Tag Football. 8:50.
CUBBERLEY, Hazel J. An Intensive Intramural Program. 1:29.
CURTIS, Henry S. Will Women be as Tall as Men? 9:46.
DANFORD, Howard C. Volleyball—A Game for Junior High School Boys. 1:22.
DANCING
A Method of Teaching Folk Dancing. Ruth Dunbar DeWindt. 5:36.
Authentic Costumes for Folk Dances. Laura May Hill. 1:17; 2:22; 3:20; 5:20; 10:27.
Program Building with the Dance. Ione Johnson. 6:17.
Simple Model for Interpretive Dancing. Elsa Sameth. 2:50.
Teaching Clogging to Boys. Kenneth L. Kline. 5:30.
Theory and Practice in Folk Dancing. Wilma D. Haynes. 8:22.
Two Original Clogs. H. C. Reuter. 9:50.
DANISH Gymnastics. See Gymnastics.
DENMARK. See Foreign Countries.
DEWINDT, Ruth Dunbar. A Method of Teaching Folk Dancing. 5:36.
DISEASES
School Control of Communicable Diseases. Allen G. Ireland. 4:30.
The Control of Ringworm. L. B. Chenoweth. 7:12.
DWIGHT, Elizabeth. Enlarging the Posture Photograph for the Corrective Room. 4:40.
EASTERN District Society News. 8:27; 10:32.
EDITORIALS. 1:20; 2:18; 3:18; 4:18; 5:18; 6:20; 7:18; 8:20; 9:18; 10:18.
EFFICIENCY Tests. See Tests.
EQUIPMENT, Gymnasium. See Gymnasium Equipment.
EVALUATING Physical Education Classwork. Edgar Everts. 5:38.
EVANS, Ruth. An Elementary School Program. 9:22.
EVERTS, Edgar. Evaluating Physical Education Classwork. 5:38.
EWING, Doris. Experimental Play Days. 2:13.
FEET
The Road to Healthy Feet. Meyer M. Pollock. 4:23.
FIELDS, Athletic. See Athletic Fields.
FISHER, George J., M. D. Scouting and the Schools. 8:10.
FISHER, Ray. Baseball in Japan. 5:9.
FOLK Dancing. See Dancing.
FOOTBALL
Football in the Kitchen. J. H. Trees. 9:50.
Indoor Football. C. R. Warthen. 1:55.
Western Conference Football Strategy—1929. G. S. Lowman. 1:25.
Western Conference Football Strategy for 1930. G. S. Lowman. 10:23.
See also Sports.
FOREIGN Countries
As One Sees Others. Carl L. Schrader. 2:6.
At the International Scout Jamboree. Deyo S. Leland. 3:12.
Baseball in Japan. Ray Fisher. 5:9.
Physical Education in European Universities. Eug. Piasecki. 5:3.
Physical Education in Fascista, Italy. Seward C. Staley. 4:3.
Professional Vacationing in Sweden and Denmark. Kerstin V. Thorin. 5:24.
The Modern Delphic Games. Lewis W. Riess. 10:14.
The New Physical Education in Germany. Frederick H. Wohlers. 8:3.
The Physical Education Movement in Soviet Russia. Sam Harby. 6:7.
GATES, Edith M. Y. M. C. A. Health Education Conferences, 1930. 9:44.
GENTER, Arthur. Basketball "Practice" Tournament. 2:50.
GERMANY. See Foreign Countries.
GIRLS' Activities
Special Spring Tournament for Grade School Girls. Ethel Bowers. 4:46.
The Illinois League of High School Girls' Athletic Associations. Ellen Mosbek. 4:22.
The Romping Rompers. Bonnie and Donnie Cotteral. 5:16.
GOLF. See Sports.
GRIFFITH, Coleman R. Studies in the Psychology of Athletics. 3:9.
GYMNASIUM Classes. See Classes, Gymnasium.
GYMNASIUM Clothing. See Clothing, Athletic.
GYMNASIUM Equipment
Solving Gymnasium Storage Problems. D. V. Trapp. 7:43; 8:36.
GYMNASTICS
Introductory Exercises to Tumbling. J. H. McCulloch. 10:40.
More Pyramids. C. V. Langton and C. C. Mauthe. 3:36.
Natural Activities on Apparatus. J. H. McCulloch. 1:40; 2:36; 4:34; 6:34.
Natural Gymnastics. Ralph E. Wiley. 5:33.
Some Pyramids for Your Demonstration. C. V. Langton and C. C. Mauthe. 1:32.
Too Much Ado About Danish Gymnastics. Dorothy Sumption. 2:30.
Wand Pyramids. C. V. Langton and C. C. Mauthe. 9:32.
HALSEY, Elizabeth. Experimental Play Days. 2:12.
HARBY, Sam. The Physical Education Movement in Soviet Russia. 6:7.
HART, Joseph K. Socialization Through Recreation. 9:8.
HAYNES, Wilma D. Theory and Practice in Folk Dancing. 8:22.
HAZELTON, Miss Helen. News Notes from the Women's Section on Athletics. 9:43.
HEALTH
How Shall Health be Taught? W. J. Wittich. 2:3.
Mental Hygiene Aspects of Physical Education. Esther L. Richards. 7:7.
More Complete Living Through Physical and Health Education. John R. McLure. 7:3.
School Health Education. Charles C. Wilson. 8:12.
Schools Hold Health Key for All Future Citizens. Thomas D. Wood. 3:3.
The Pre-School Child as a Health Problem. Richard A. Bolt. 1:12.
HEALTH Tests. See Tests.
HEDGES, E. "Hello, Badminton!" 9:34.
HEIDEMAN, Walter H. Planning an Athletic Field. 9:38.
HILL, Laura May. Authentic Costumes for Folk Dances. 1:17; 2:22; 3:20; 5:20; 10:27.
HISTORY of Physical Education
A Fundamental Point of View in Physical Education. Jesse F. Williams. 1:10.
Aristotle on Kinesiology. Jean E. Chryssafis 7:14.
Aristotle on Physical Education. Jean E. Chryssafis. 1:3; 2:14.
Physical Education a Century Ago. Emmet A Rice. 4:16.
The Evolution of Gymnasium Clothing for Women.. C. B. Aldrich. 8:15.
HOLTON, Ruby Anna. Hand Tennis, A Suitable Game for Those Taking Restricted Gymnasium. 5:38.
HOTCHKISS, A. S. "Tag" Speedball—A Running Game. 7:36.

HUNT, Charles H. Organization Chart of Long Beach, California. 10:34.

HYGIENE
Football in the Kitchen. J. H. Trees. 9:50.
Nutrition for College Freshmen. John A. Sullivan. 2:50.
The Shower Bath. Michael Peppe. 5:6.
See also Health.

INDIVIDUAL Physical Education. See Correctives.

INTERPRETIVE Dancing. See Dancing.

INTRAMURALS
An Intensive Intramural Program. Hazel J. Cubberley. 1:29.
Intramurals in Junior High Schools. Harry L. Samuel. 9:26.

IRELAND, Allen G. School Control of Communicable Disease. 4:30.

JAPAN. See Foreign Countries.

JOB Analysis Technique Should be Applied to Physical Education. N. P. Neilson. 1:9.

JOHNSON, IONE. Program Building with the Dance. 6:17.

JOHNSTONE, John. Indoor Soccer. 3:44.

JOY, Barbara Ellen. Newer Tendencies in Camping Education. 5:26.

KENNEY, H. E. The Problem of Weight Making for Wrestling Meets. 3:24.

KIMBALL, Ruth. The "Party a Month" Plan. 1:38; 2:38; 3:23.

KINESIOLOGY. See Chryssafis, Jean.

KLEEBERGER, Frank. A Rental System for Administration of Athletic Clothing. 8:24.

KLINE, Kenneth L. Teaching Clogging to Boys. 5:30.

KNIGHTON, Marian. Soccer Questions. 8:29.

KULCINSKI, Louis. A Four Year Program for High Schools. 8:21.

LANGTON, Clair V., and Mauthe, C. C. Some Pyramids for your Demonstration. 1:32; 3:36; 9:32.

LEE, Mabel. Equipment and Rules of Nebraska Ball. 3:44.

LELAND. Arthur. A Boomerang Tournament. 4:36.

LELAND, Deyo S. At the International Scout Jamboree. 3:12.

LIVING Statuary. L. W. Olds. 4:12.

LOCKERS. See Gymnasium Equipment.

LOKRANZ, Sven. Corrective Physical Education Practiced in Los Angeles City Schools. 3:6.

LOWMAN, G. S.
Western Conference Football Strategy for 1929. 1:25.
Western Conference Football Strategy for 1930. 10:23.

LYNAM, Frank, M. D. Archery as a School Sport. 4:26.

MANFRED, Bernard F. Point System for Boys' Physical Activities. 4:36.

MARONEY, F. W. Developments in the American Physical Education Association. 1:21.

MAUTHE, C. C. Co-author. See Langton, C. V.

McCULLOCH, J. H.
Introductory Exercises to Tumbling. 10:40.
Natural Activities on Apparatus. 1:40; 2:36; 4:34; 6:34.

McLURE, John R. More Complete Living Through Physical and Health Education. 7:3.

MEFFERT, L. J. Spring Relays for Grade Schools. 5:38.

MENTAL Hygiene. See Hygiene.

METCALF, Harlan G. Objectives of Individual Physical Education for College Men. 9:10.

MILLER, Bernice Amanda. Growing Need of Physical Recreation Among Employed Women. 10:3.

MOLANDER, C. O. The 1930 Middle West Convention. 6:21.

MOSBECK, Ellen. The Illinois League of High School Girls' Athletic Associations. 4:22.

NASH, Jay B. Administration of Physical and Health in the Light of General Education Needs. 10:9.

NATIONAL Committee-Report. Uniform Certification Urged Upon States. 7:19.

NEILSON, N. P. Job Analysis Technique Applied to Physical Education. 1:9.

NORTON, Herman J. After-School Athletic Activities. 3:16.

NUTRITION. See Hygiene.

OLDS, Lloyd W. Living Statuary. 4:12.

ORTNER, Howard B. New Rules for Touch Football. 7:40.

OTOPALIK, H. Introducing Wrestling in Our Schools. 2:33.

OTTIS, Irene C. Coaching Methods for Girls' Basketball. 1:35.

OWENS, Florence. Interpretive Rhythms in the Grades. 10:22.

"PARTY a Month Plan." See Recreation.

PEPPE, Michael. The Shower Bath. 5:6.

PHYSICAL Achievement Standards. See Tests.

PHYSICAL Education, History of. See History of Physical Education.

PHYSIOLOGY
Concerning the Physiology of Work and Overwork. Arthur H Steinhaus. 8:34.
The Spleen as a Factor in Athletics. Arthur H Steinhaus. 9:46.
Two Unusual Experiments which Throw Light on the Nature of Fatigue. Arthur H Steinhaus. 10:20.

PIASECKI, Eug., M. D. Physical Education in European Universities. 5:3.

PLAY Days. See Recreation.

POINT System. See Awards.

POLLOCK, Meyer M. The Road to Healthy Feet. 4:23.

POSTURE
Bodily Posture as a Mental Attitude. Charles C. Cowell. 5:14.
Enlarging the Posture Photograph for the Correction Room. Elizabeth Dwight. 4:40.
See also Correctives; Restricted Gymnasium.

PRE-SCHOOL Child as a Health Problem, The. Richard A. Bolt. 1:12.

PSYCHOLOGY of Athletics. See Athletics.

PYRAMIDS. See Gymnastics.

RECREATION
Experimental Play Days. Helen Schleman, 2:8; Geralding Stratton, 2:10; Elizabeth Halsey, 2:12; Doris Ewing, 2:13.
Party a Month Plan. Ruth Kimball. Jan., 1:38; Feb., 2:38; March, 3:23.
Socialization Through Recreation. Joseph K. Hart. 9:8.

REMEDIAL Exercises. See Correctives.

RENTAL System for Administration of Athletic Clothing, A. Frank Kleeberger. 8:24.

RESTRICTED Gymnasium
Hand Tennis, a Suitable Game for Those Taking Restricted Gymnasium. Ruby A. Holton. 5:38.
See also Correctives; Posture.

REUTER, H. C. Two Original Clogs. 9:50.

REYNOLDS, Herbert J. Volleyball Tests. 3:42.

RHYTHMS.
Interpretive Rhythms in the Grades. Florence Owens. 10:22.

RICE, Emmet A., Physical Education a Century Ago. 4:16.

RICHARDS, Esther L. Mental Hygiene Aspects of Physical Education. 7:7.

RIESS, Lewis W. The Modern Delphic Games. 10:14.

RINGWORM. See Diseases.

ROGERS, James E.
Around the Country with J. E. Rogers. 3:19; 4:19; 5:22; 6:30; 7:29; 8:32; 9:29; 10:21.
State Health and Physical Education. 2:25.

ROMPING Rompers, The. Bonnie and Donnie Cotteral. 5:16.

ROUNSEVELLE, Philip.
Maintaining Interest in Archery. 9:24.
Proper Archery Technique. 7:23.

RUSSIA. See Foreign Countries.

SAFETY
School Safety Education. Herbert J. Stack. 9:3.

SAMETH, Elsa. Simple Model for Interpretive Dancing. 2:50.

SAMUEL, Harry L. Intramurals in Junior High Schools. 9:26.

SAVAGE, Howard J. Athletics for Women from a National Point of View. 6:12.

SAYLOR, Edythe. Popularizing Correctives. 7:33.

SCHLEMAN, Helen. Experimental Play Days. 2:8.

SCHMIDT, Paul F. Grade School Health and Efficiency Tests. 2:20.

SCHNITMAN, Ralph J. Mass Teaching in Basketball Skills. 10:35.

SCHOOL Health. See Health.

SCHOOL Activities
A Four Year Program for High Schools. Louis Kulcinski. 8:21.
An Elementary School Program. Ruth Evans. 9:22.
Grade School Health and Efficiency Tests. Paul F. Schmidt. 2:20.
Interpretive Rhythms in the Grades. Florence Owens. 10:22.
Intramurals in Junior High Schools. Harry L. Samuel. 9:26.
Special Spring Tournament for Grade School Girls. Ethel Bowers. 3:46.
Spring Relays for Grade Schools. L. J. Meffert. 5:38.
The Illinois League of High School Girls' Athletic Associations. Ellen Mosbek. 4:22.

SCHRADER, Carl L.
As One Sees Others. 2:6.
The Influence of Physical Education Activities upon Constitution, Child-Bearing and Menstruation of Women (A Translation) 9:47.
The 1930 National Convention, Boston. 6:3.

SCOTT, Harry A.
Essentials in Teacher Training. 4:10.
Preliminary Report of the Committee on Professional Ethics. 9:19.

SCOUTING
At the International Scout Jamboree. Deyo S. Leland. 3:12.
Scouting and the Schools. George J. Fisher. 8:10.

SHARMAN, J. R. Standards in the Administration of a State Program of Physical Education. 6:25.

SHOWER Baths
The Shower Bath. Michael Peppe. 5:6.

SMITH, W. R. Sportsmanship in Basketball Tournaments. 3:39.

SOCCER
Elementary Team Play in Soccer. J. H. Brock. 7:34.
Indoor Soccer. John Johnstone. 3:44.
Soccer Questions. Marian Knighton. 8:29.

SPORTS, Newer
Beeball—Combining Football and Soccer. C. W. Beeman. 7:38.
Equipment and Rules of Nebraska Ball. Mabel Lee. 3:44.
Golf as a High School Activity. Ralph Coleman. 6:32.
"Hello, Badminton!" E. Hedges. 9:34.
New Rules for Touch Football. Howard B. Ortner. 7:40.
Tag Football. Frank Crozier. 8:50.
Tag Speedball—A Running Game. A. S. Hotchkiss. 7:36.
See also Swimming, Baseball, Volley Ball, Football, Soccer.

SPORTSMANSHIP
Sportsmanship in Basketball Tournaments. W. R. Smith. 3:39.

STACK, Herbert J. School Safety Education. 9:3.

STALEY, Seward C. Physical Education in Fascista, Italy. 4:3.

STATE Health and Physical Education. James E. Rogers. 2:25.

STEINHAUS, Arthur H
The Physiology of Work and Overwork. 8:34.
The Spleen as a Factor in Athletics. 9:46.
Two Unusual Experiments which Throw Light on the Nature of Fatigue. 10:20.

STRATTON, Geraldine. Experimental Play Days. 2:10.

SULLIVAN, John A. Nutrition for College Freshmen. 2:50.

SUMPTION, Dorothy. Too Much Ado About Danish Gymnastics. 2:30.

SWEDEN. See Foreign Countries.

SWIMMING
Achievement Records in Swimming. Charlotte W. Anderson. 5:40.
What Seattle is Doing for Swimming. John A Torney, Jr. 9:15.

TAG Football and Speedball. See Sports, Newer.

TEACHER Training
Essentials in Teacher Training. Harry A. Scott. 4:10.

TESTS
A Method of Classifying Pupils for Physical Education Tests and Intramural Teams. J. R. Benjamin. 1:55.
Grade School Health and Efficiency Tests. Paul F. Schmidt. 2:20.
National Physical Achievement Standards. A Lester Crapser. 1:14.
Test Scoring in Physical Education. Frederick W. Cozens, 10:16.
Volleyball Tests. Herbert J. Reynolds. 3:42.

THORIN, Kerstin V. Professional Vacationing in Sweden and Denmark. 5:24.

TORNEY, John A., Jr., What Seattle is Doing for Swimming. 9:15.

TOUCH Football. See Sports, Newer.

TRAPP, D. V. Solving Gymnasium Storage Problems. 7:43; 8:36.

TREES, J. H. Football in the Kitchen. 9:50.

TUMBLING. See Gymnastics.

VOLLEYBALL
Volleyball—A Game for Junior High School Boys. Howard G. Danford. 1:22.
Volleyball Tests. Herbert J. Reynolds. 3:42.

VOLPE, Mamie. Games, Relays and Plays for the Teaching of Technique in Girls' Basketball. 2:34; 3:40.

WARTHEN, C. R. Indoor Football: Being a Combination of Football and Indoor Baseball. 1:55.

WEIGHING and Measuring Program, A. Helen M. Barton. 9:12.

WILDER, Emma L. Work and Play at La Crosse. 5:38.

WILEY, Ralph E. Natural Gymnastics. 5:31.

WILLIAMS, Jesse Feiring. A Fundamental Point of View in Physical Education. 1:14.

WILSON, Charles C. School Health Education. 8:12.

WITTICH, W. J. How Shall Health be Taught? 2:3.

WOHLERS, Frederick H. The New Physical Education in Germany. 8:3.

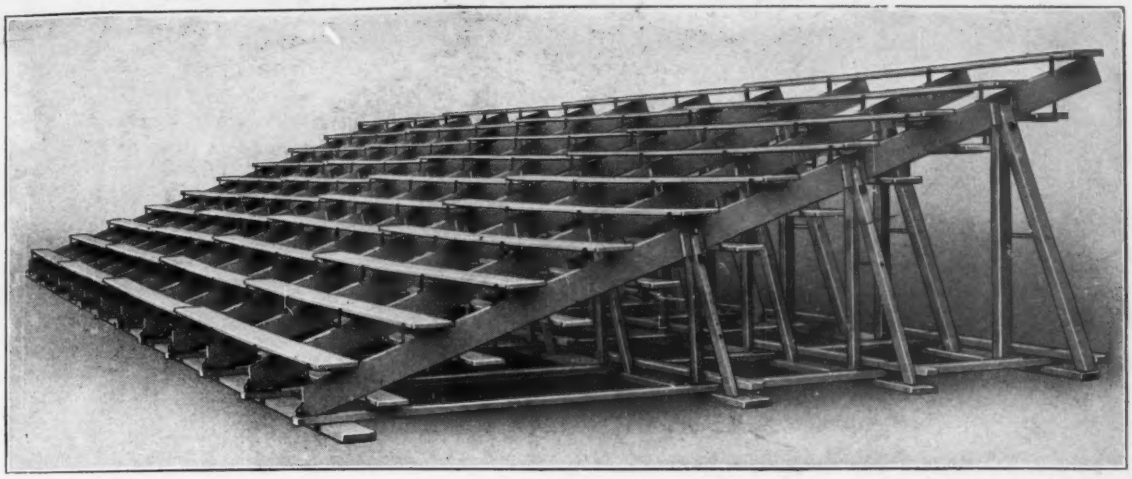
WOMEN
Athletics for Women from a National Point of View. Howard J. Savage. 6:12.
Growing Need of Physical Recreation Among Employed Women. Bernice Amanda Miller. 10:3.
The Influence of Physical Education Activities upon Constitution, Child-Bearing and Menstruation of Women. Translation by Carl L. Schrader. 9:47.
Will Women be as Tall as Men? Henry A. Curtis. 9:46.

WOOD, Thomas D. Schools Hold Health Key for All Future Citizens. 3:3.

WORK and Play at La Crosse. Emma L. Wilder. 5:38.

WRESTLING
Introducing Wrestling in Our Schools. H. Otopalik. 2:33.
The Problem of Weight Making for Wrestling Meets. H. E. Kenney. 3:24.

Y.W.C.A. Health Education Conferences, 1930. Edith M. Gates. 9:44.



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